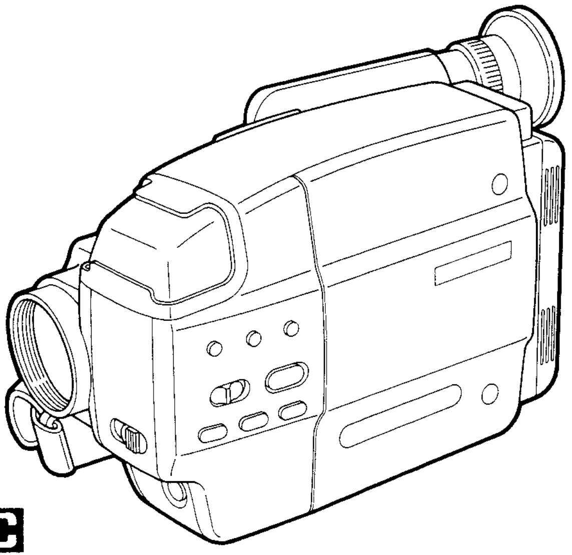
1992

MITSUBISHI

# Service Manual

VIDEO CAMERA/RECORDER



MODEL

## HS-CX7(A)
## HS-CX7(B)
## HS-CX7(E)

Only cassettes marked S-VHS-C or VHS-C can be used with this VIDEO CAMERA/RECORDER.

## SPECIFICATION

| | |
|---|---|
| **Tape Format** | S-VHS-C and VHS-C 1/2" high-density video cassette tape |
| **Power Source** | DC 6.0V |
| **Power Consumption** | Approx. 7W |
| **Signal System** | PAL System |
| **Video Recording System** | Azimuth helical scanning system |
| **Luminance** | Frequency modulation recording |
| **Color Signal** | Low frequency conversion sub-carrier phase shift recording |
| **Hi-Fi Audio Recording System** | Azimuth helical scanning system, Frequency modulation, deep layer recording |
| **Linear Audio Track** | 1 track |
| **Tape Speed** | 23.39 mm/sec(SP mode)<br>11.70 mm/sec(LP mode) |
| **Record/Playback Time** | 45 min. with EC-45 cassette (SP mode)<br>90 min. with EC-45 cassette (LP mode) |
| **Video Output** | 1.0 Vp-p,75 ohm unbalanced AV OUT/EDIT socket |
| **Audio Output** | –6dBs, 1k ohm unbalanced AV OUT/EDIT socket |

| | |
|---|---|
| **Pick Up** | 1/3"-format CCD |
| **Minimum Required Illumination** | 7 lux |
| **Lens** | F1.8, f6~48mm<br>8:1 power zoom lens with auto iris control Filter diameter 49 mm |
| **Viewfinder** | Electronic viewfinder with 0.6"black/white CRT |
| **White Balance Adjustment** | Full-auto/selectable FIX, INDOOR or OUTDOOR |
| **Operating Temperature** | 0°C ~ +40°C |
| **Operating Humidity** | 30% ~ 80% |
| **Weight** | Approx. 590g |
| **Dimensions** | 105(W) x 112(H) x 155(D)mm |

**AC POWER ADAPTER DA-M1(A,B,C)**

| | |
|---|---|
| **Power Source** | AC 110 ~ 240V; 50/60Hz |
| **Power Consumption** | Approx. 19W |
| **Rated Output Voltage** | DC 6.0V |
| **Rated Output Current** | 1.8A(VIDEO CAMERA/RECORDER),<br>1.3A(Battery) |
| **Charging System** | Constant current, voltage controlled |
| **Dimensions** | 65(W) x 39.5(H) x 138(D) |

- Weight and dimensions shown are approximate.
- Design and specifications are subject to change without notice.

MITSUBISHI ELECTRIC

# CONTENTS

SAFETY PRECAUTIONS ..... 1
CONNECTION ..... 3
DISASSEMBLY ..... 4
1. Case(Outer)Disassembling Procedure ..... 4
2. Disassembling Chassis unit ..... 6
3. Disassembling Case unit(L) ..... 8
4. Disassembling Power knob of the Case unit(R) .. 10
5. Disassembling Eject knob of the Case unit(R) .... 10
6. Disassembling Release button of the Case unit(R) ..... 10
7. Disassembling Other parts of the Case unit(R) ... 10
8. Disassembling Front panel unit ..... 12
9. Disassembling AC Power Adapter ..... 12
10. Disassembling EVF(Electronic View finder) unit ..... 13
11. Disassembling Camera unit ..... 14
12. Disassembling Lens unit ..... 15

Replacing CCD Image Sensor ..... 16
Table of Extension Jigs ..... 17
Using Extension Jigs ..... 18

Adjusting VCR Unit Circuit ..... 20
  Location of Adjustment Points(VCR Section) ..... 22
  Power Supply Circuit ..... 23
  Servo Circuit ..... 23
  Y/C Signal Circuit ..... 24
  Normal Audio Circuit ..... 28
  Hi-Fi Audio Circuit ..... 29
  Character Display Circuit ..... 30

Adjusting Camera Unit Circuit ..... 31
  Location of adjustment Points (Camera Section) ..... 34

MECHANICAL ADJUSTMENT ..... 45
1. Jigs and Measuring Instruments Required for Mechanism Adjustment ..... 45
  1-1 Jigs for Adjustment ..... 45
  1-2 Other Tools and Measuring Instruments Required ..... 45
  1-3 Soldering points of lead wire ..... 45

2. CLEANING ..... 46
  2-1 Cleaning the video head ..... 46
  2-2 Cleaning the tape path system ..... 46
  2-3 Cleaning the reel disk driving system ..... 46

3. HOW TO ATTACH THE MASTER PALANE ..... 46

4. HOW TO REPLACE THE PRINCIPAL PARTS .. 47
  4-1 Cassette housing replacement ..... 47
  4-2 Damper unit replacement ..... 48
  4-3 Drum assembly replacement ..... 49
  4-4 Loading motor replacement ..... 49
  4-5 Reel disk replacement ..... 50
  4-6 Reel gear replacement ..... 50
  4-7 Sync belt replacement ..... 51
  4-8 Clutch unit replacement ..... 51
  4-9 A/C head replacement ..... 52
  4-10 Pinch roller assembly and Pinch roller replacement ..... 53
  4-10-1 Pinch roller assembly replacement ..... 53
  4-10-2 Pinch roller replacement ..... 53
  4-11 Slant T replacement ..... 54
  4-12 Takeup guide arm replacement ..... 55
  4-13 Supply impedance roller replacement ..... 55
  4-14 Capstan motor replacement ..... 56
  4-15 Supply tape guide assembly and Supply guide roller replacement ..... 57
  4-15-1 Supply tape guide assembly replacement ..... 57
  4-15-2 Supply guide roller replacement ..... 57
  4-16 Takeup tape guide assembly and Takeup guide roller replacement ..... 58
  4-16-1 Takeup tape guide assembly replacement ..... 58
  4-16-2 Takeup guide roller replacement ..... 58
  4-17 Mode switch replacement ..... 59
  4-18 Cam T replacement ..... 60
  4-19 Tape guide stopper assembly replacement ..... 61

5. ADJUSTMENTS ..... 62
  5-1 Back tension and Tension pole adjustment ..... 62
  5-2 FM envelope check and adjustment ..... 63
  5-2-1 Guide roller Check ..... 63
  5-2-2 Supply guide roller height adjustment ..... 63
  5-2-3 Takeup guide roller height adjustment ..... 63
  5-3 Phase adjustment(coarse) ..... 64
  5-4 FM waveform flatness check ..... 65
  5-5 A/C head adjustment ..... 65
  5-5-1 A/C head height, azimuth and slant adjustment ..... 65
  5-6 GR-lever roller tape running adjustment ..... 66
  5-7 Phase adjustment(fine) ..... 66

KEY TO ABBREVIATIONS ..... 67
CHIP PARTS REPLACEMENT ..... 68

PARTS LIST ..... 69
  1. Outer parts ..... 69
  2. Cabinet parts ..... 70
  3. Chassis Assembly Parts ..... 71
  4. Case Assembly(Right side) Parts ..... 72
  5. Case Assembly(Left side) Parts ..... 73
  6. EVF(Electronic View finder) unit Parts ..... 74
  7. Camera Unit Parts ..... 74
  8. Front panel Assembly Parts ..... 75
  9. AC Power Adapter Parts ..... 75
  10. Packing Parts ..... 76
  11. Electrical Parts ..... 78
  12. AC Power Adapter Parts ..... 96
  13. Deck Assembly

# SAFETY PRECAUTIONS

## INTRODUCTION

This manual provides service information for the adjustments of mechanical and electrical operations.

Due to design modifications, the servicing procedures and data given in this manual are subject to possible change without prior notice.

**WARNING**:Many of the programs broadcast by television stations are protected by copyright and Federal law imposes strict penalties for copyright infringement. Some motion picture companies have taken the position that home recording for noncommercial purposes is an infringement of their copyrights. Until the courts have ruled on the proper interpretation of the law as applied to home video recording, this equipment, if used to record copyrighted material, should be operated at user's own risk.

**WARNING:**
**TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**
**This equipment should be used with DC 6V only.**
**CAUTION:**
**To prevent electric shocks and fire hazards, do not use any other power source.**
**The AC power adapter/battery charger should be used with:**
**AC120V; 60Hz in the USA and Canada, AC110/220/240V; 50/60Hz in other countries. (NTSC model)**
**AC110~240V; 50/60Hz. (PAL model)**
**CAUTION:**
**To prevent electric shocks and fire hazards, do not use any other power source.**

**X-RAY RADIATION**

The primary source of X-ray radiation in this viewfinder is the picture tube. The tube used in this viewfinder is especially constructed to limit X-ray radiation emission. For continued X-ray radiation protection, the replacement tube must be the same type as the original. Mitsubishi approved one.

## SAFETY NOTICE

Before returning VIDEO CAMERA/RECORDER to the customer a safety check of the entire VIDEO CAMERA/RECORDER should be made, The service technician must be sure that no protective device built into the instrument by the manufacturer has become defective or inadvertently damaged during servicing.

Observe all caution and safety related notes located on or inside the VIDEO CAMERA/RECORDER cabinet.

**WARNING:** Alterations of the design or circuitry of this VIDEO CAMERA/RECORDER should not be made.

Any design alterations or additions, such as circuit modifications, auxiliary speaker jacks, switches, grounding, active or passive circuitry, etc. use of unauthorized AC power adapter/charger, battery, cables, accessories, etc. may alter the safety characteristics of this VIDEO CAMERA/RECORDER and potentially create a hazardous situation for the user.

Any design alterations or unauthorized additions will invalidate the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting from them.

Do not lubricate any motors.

When reassembling the VIDEO CAMERA/RECORDER, always be certain that all the protective devices are put back in place, such as non-metallic control knobs, shield plate, etc.

When service is required, observe the original lead dress. Components that indicate evidence of overheating or other electrical or mechanical damage should be replaced.

## LEAKAGE CURRENT CHECK

Before returning the VIDEO CAMERA/RECORDER to the customer, it is recommended the leakage current be measured by the following methods.

### 1.Cold Check

With the AC plug removed from the AC source, place a jumper across the two AC plug prongs. Turn the AC switch on. Using an ohmmeter, connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part(metal cabinet, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistance reading of 1 megaohm. Any resistance below this value indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

2.Hot Check

The test sequence, with reference to the measuring circuit in Fig. 1 is as follows:

(1) With switch S1 open, the VIDEO CAMERA/RECORDER is to be connected to the measuring circuit. Immediately after connection, the leakage current is measured using both positions of switch S2 and with the switching devices in the VIDEO CAMERA/RECORDER in all of their operating positions.

(2) Switch S1 is then to be closed, energizing the VIDEO CAMERA/RECORDER, and immediately after closing the switch, the leakage current is to be measured using both positions of switch S2, and with the switching devices in the VIDEO CAMERA/RECORDER in all of their operating positions.

Current measurements of items (1) and (2) are to be repeated after the VIDEO CAMERA/RECORDER has reached thermal stabilization.

The leakage current shall not be more than 0.5 milliampere.

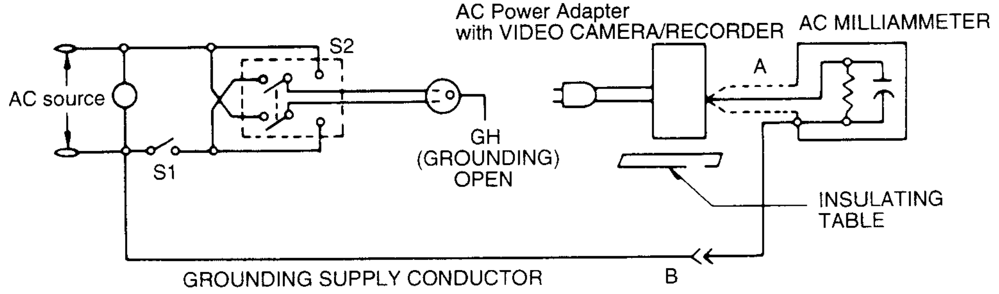


Fig. 1

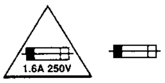
**AC Leakage Test**

Avoid shock hazards. Do not connect this VIDEO CAMERA/RECORDER to a TV antenna, cable or accessory that exhibits excessive leakage currents. If available, the television instrument or cable to which this VIDEO CAMERA/RECORDER is connected should have the antenna cold check and the leakage current hot check performed.

## PRECAUTIONS

### Handling and storage

- Avoid using the VIDEO CAMERA/RECORDER in the following places:
  - extremely hot, cold or humid places,
  - dusty places,
  - near appliances generating strong magnetic fields,
  - places subject to vibration, and
  - poorly ventilated areas.
- Be careful of moisture condensation.
- If you pour a cold liquid into a glass, water vapor in the air will condense on the surface of the glass.
  This is called moisture condensation.
- Moisture condensation on the head drum, one of the most critical parts of the VIDEO CAMERA /RECORDER, will cause damage to the tape.
- Moisture in the air will condense on the VIDEO CAMERA/RECORDER when you move the unit from a cold place to a warm place, after heating a cold room or under extreme humidity conditions. Avoid using the VIDEO CAMERA/RECORDER under these conditions.
- Handle the VIDEO CAMERA/RECORDER carefully.
- Do not place anything heavy on the VIDEO CAMERA/RECORDER.
- In case of transportation:
  Avoid violent shocks to the VIDEO CAMERA/RECORDER during packing and transportation.
- Before packing, be sure to remove the cassette from the VIDEO CAMERA/RECORDER.



THIS SYMBOL INDICATES "FAST OPERATING FUSE".

Ce symbole indique un "fusible à fonctionnement rapide".

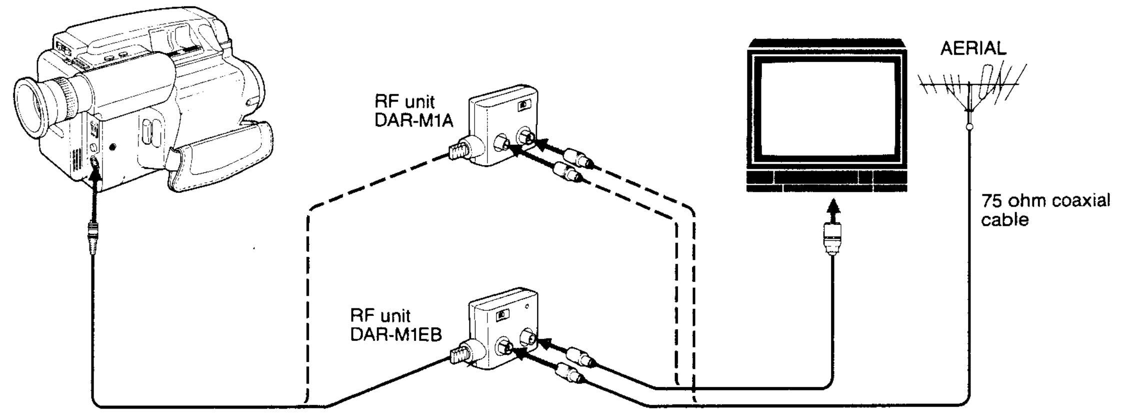
**CAUTION:** FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 1.6A, 250V FUSE.

**ATTENTION:** Pour une protection permanente contre un risque d'incendie, ne remplacer qu'avec un fusible de 1.6A, 250V de même type.

# CONNECTION

### Connection to a TV without audio/video inputs

Disconnect the antenna cable from the back of the TV. Connect antenna cable to the RF IN terminal on the RF unit. If an antenna cable other than 75 ohm coaxial cable is to be use, install the matching transformer (300 ohm →75 ohm).
Connect one end of the coaxial cable to the RF OUT terminal on the RF unit.
Connect the other end of the coaxial cable to the ANTENNA IN terminal of the TV set. If no 75 ohm terminal is abailable on the TV set, a VHF/UHF splitter must be used.
Connect the RF unit cable to the AV OUT/EDIT terminal on the VIDEO CAMERA/RECORDER.



### Connection to a TV with video/audio inputs

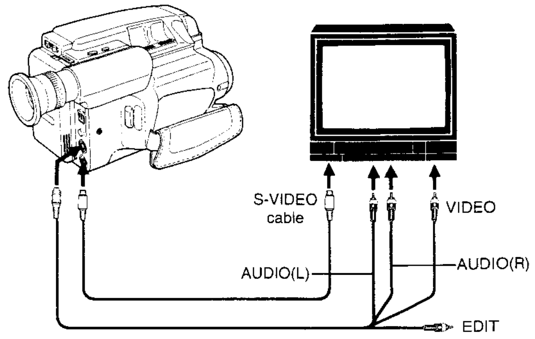
Connect the RCA type audio/video cable to the AV OUT/EDIT terminal on the VIDEO CAMERA/RECORDER. To do this, align the plug so that the arrow faces up and gently press it into place.
Connect the other side of the cable to the TV.

AUDIO(L) : To AUDIO(L) IN terminal
AUDIO(R) : To AUDIO(R) IN terminal
VIDEO : To VIDEO IN terminal
(Do not connect this cable if you wish to connect a S-VIDEO cable.)
EDIT : Do not connect

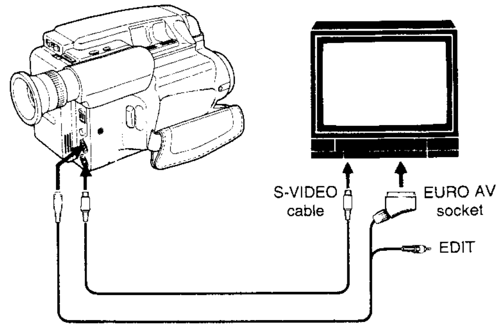
### Connection to a TV with EURO AV socket

Connect the EURO AV cable to the AV OUT/EDIT terminal on the VIDEO CAMERA/RECORDER. To do this, align the plug so that the arrow faces up and gently press it into place.
Connect the other side of the cable to the EURO AV terminal on the TV.

**TV WITH AUDIO AND VIDEO INPUTS**



**TV WITH EURO AV SOCKET**



## DISASSEMBLY

**Warning :** Detach the FPC cable according to procedures indicated in this manual, or do not touch the exposed terminal of the connector directly because they can cause malfunction. Open the connector for FPC cable in the order shown by the arrows in Fig. 1 to remove the connector. (To connect the FPC cable reverse procedures of this disassembly.)

**Note :** FPC connectors, VE, PD, VD, VG, VS, JS, JT must be performed arrow ① in Fig. 1 only.

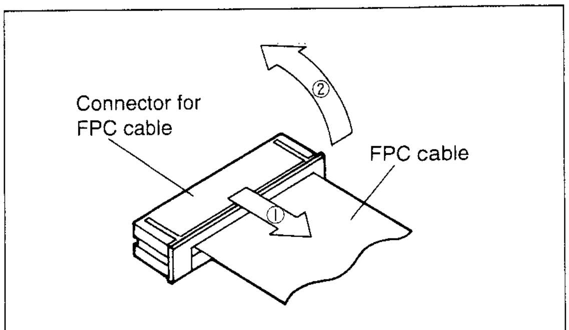


**Fig. 1**

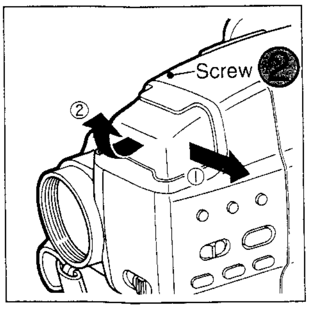
## 1. Case (Outer) Disassembling Procedure

| Order | 1 (possible in no order of these items) | | | | 2 |
|---|---|---|---|---|---|
| Article name | Cassette housing | Microphone unit | Zoom switch | Tripod base | Case unit (L) |
| Symbol of removed No. | ● | ❷ | ❸ | ④ | ⑤ |
| Screw & Terminal to be removed | Screws-2pcs. | Screw-1pc.<br>Terminal-MN | Screw-1pc.<br>Terminal-ZA | Screws-3pcs. | Screws-8pcs.<br>Terminels-JS, JT |

| Order | 3 | 4 | 5 |
|---|---|---|---|
| Article name | Front panel unit | Case unit (R) | Chassis assembly & Camera assembly |
| Symbol of removed No. | ⑥ | ● | ⑧ |
| Screw & Terminal to be removed | Screws-2pcs. | Screws-2pcs.<br>Terminal-RP | Screws-2pcs.<br>Terminals-CA, SB |

**Important :**

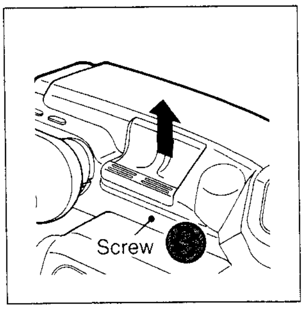
### 1. Removing Microphone unit



1. Remove the screw No. 2. (See figure above and the following page.)
2. Slide the Microphone unit to right slightly. Lift up the bottom of the microphone unit carefully.

**Caution :** Do not stretch the lead of connector MN in removing Microphone unit.

### 2. Removing Zoom switch

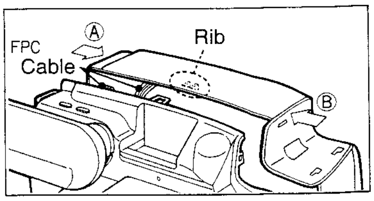


1. Remove the screw No. 3. (See figure above and the following page.)
2. Lift up carefully.

**Caution :** Do not stretch the lead of connector ZA in removing Microphone unit.

### 3. Removing Case unit

1. Remove the screw No. 5. (See figure above and the following page.)



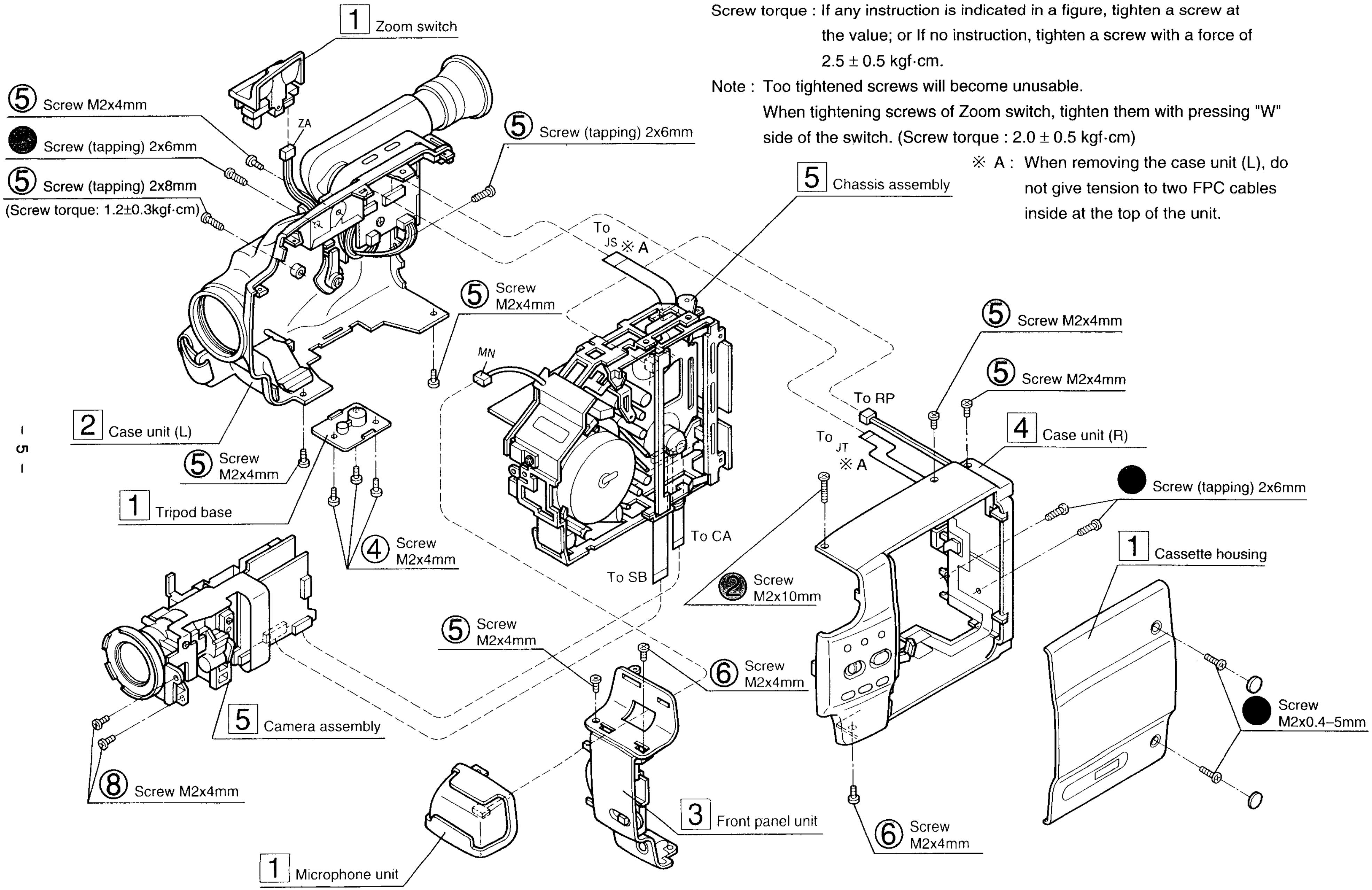
2. Press points A and B as shown by the arrows in the above figure then carefully detach the rib.
3. Hold the Case unit (L) slightly away from the Case unit (R) , and remove it from the bottom cast and then the top of the unit.

**Caution :** Do not apply tension to two the FPC cables inside of the unit at the top.

Screw torque : If any instruction is indicated in a figure, tighten a screw at the value; or If no instruction, tighten a screw with a force of 2.5 ± 0.5 kgf·cm.

Note : Too tightened screws will become unusable.
When tightening screws of Zoom switch, tighten them with pressing "W" side of the switch. (Screw torque : 2.0 ± 0.5 kgf·cm)

※ A : When removing the case unit (L), do not give tension to two FPC cables inside at the top of the unit.



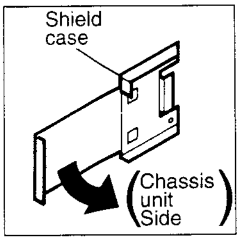
1 Zoom switch
⑤ Screw M2x4mm
● Screw (tapping) 2x6mm
⑤ Screw (tapping) 2x8mm
(Screw torque: 1.2±0.3kgf·cm)
ZA
⑤ Screw (tapping) 2x6mm
5 Chassis assembly
To JS ※A
⑤ Screw M2x4mm
MN
⑤ Screw M2x4mm
⑤ Screw M2x4mm
To RP
To JT ※A
4 Case unit (R)
2 Case unit (L)
⑤ Screw M2x4mm
1 Tripod base
④ Screw M2x4mm
To CA
To SB
● Screw (tapping) 2x6mm
1 Cassette housing
② Screw M2x10mm
⑤ Screw M2x4mm
⑥ Screw M2x4mm
● Screw M2x0.4–5mm
5 Camera assembly
⑧ Screw M2x4mm
3 Front panel unit
⑥ Screw M2x4mm
1 Microphone unit

## 2. Disassembling Chassis Unit

| Order | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Article name | VTR - SUB PCB ASSY | Shield case | Camera SW ASSY | VTR PCB ASSY | Rear PCB ASSY |
| Symbol of removed No. |  |  | ● | ❷ |  |
| Screw & Terminal to be removed | Terminals-<br>PC, PD, PP, PQ |  | Screw-1pc.<br>Terminal-VF | Screws - 6pcs.<br>Terminals-<br>VD, VE, VG, VL, VM | Terminal-RR |

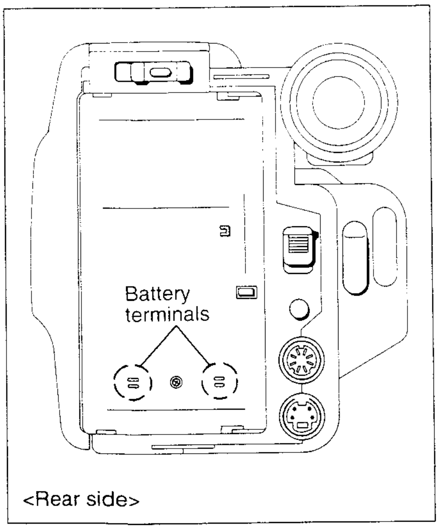
**Important :**

### 1. Attaching Shielded Case

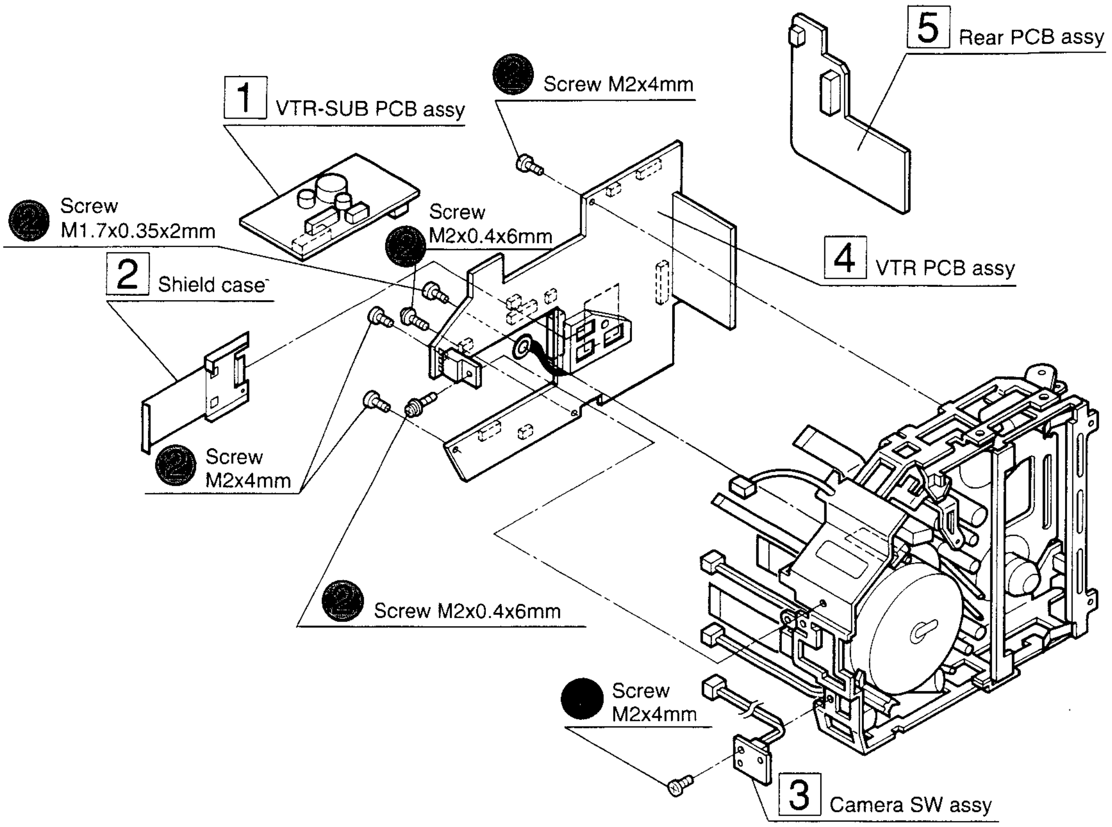


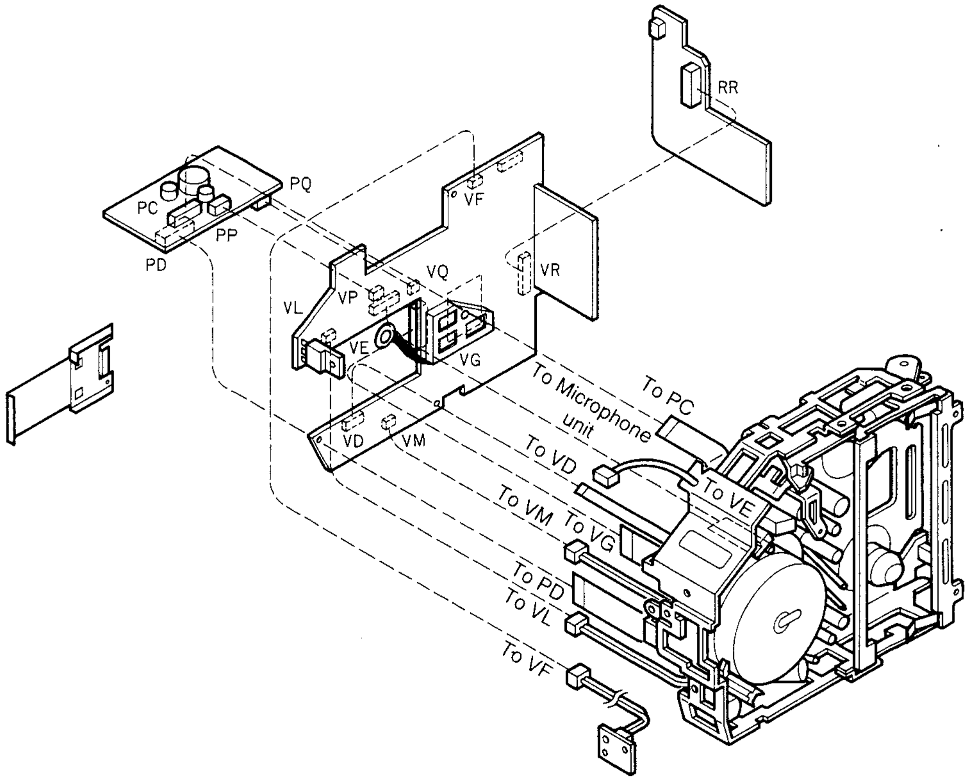
Press copper foil sheet to a direction shown by arrow in the figure to attach it the VTR PCB ASSY, avoid interfering with the FPC cable.

### 2. Attaching Chassis unit and Case unit (R)



Insert battery terminals on the Rear PCB Assy in the holes of the back panel of the Case unit (R) to fit the Chassis unit into the Case unit (R).


5 Rear PCB assy
Screw M2x4mm
1 VTR-SUB PCB assy
Screw M1.7x0.35x2mm
Screw M2x0.4x6mm
2 Shield case
4 VTR PCB assy
Screw M2x4mm
Screw M2x0.4x6mm
Screw M2x4mm
3 Camera SW assy


RR
PQ
PC
VF
PP
PD
VR
VQ
VL
VP
VE
VG
VD
VM
To Microphone unit
To PC
To VD
To VE
To VM
To VG
To PD
To VL
To VF

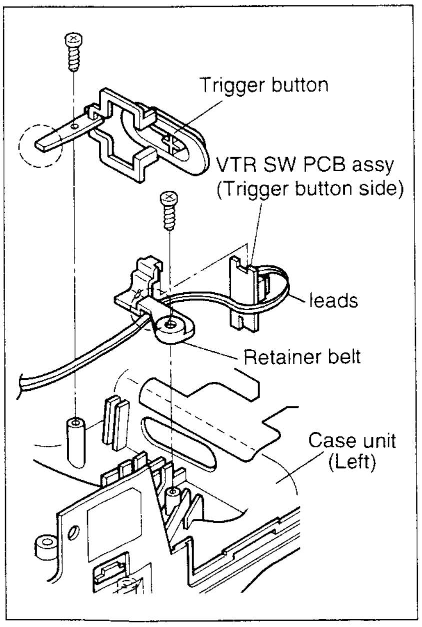
## 3. Disassembling Case unit (L)

| Order | $\boxed{1}$ | $\boxed{2}$ | $\boxed{3}$ | after $\boxed{1}$ | after $\boxed{2}$ |
|---|---|---|---|---|---|
| Article name | Retainer belt | VTR SW PCB assy | EVF unit | Grip belt | Trigger button |
| Symbol of removed No. | ● | ❷ | ❸ | | ④ |
| Screw & Terminal to be removed | Screw-1pc. | Screws-2pcs.<br>Terminal-JB, JE | Screws-2pcs. | | Screw-1pc. |

| Order | Possible in no order of these items |
|---|---|
| Article name | Back up battery holder |
| Symbol of removed No. | ⑤ |
| Screw & Terminal to be removed | Screws-2pcs.<br>Terminal-JB |

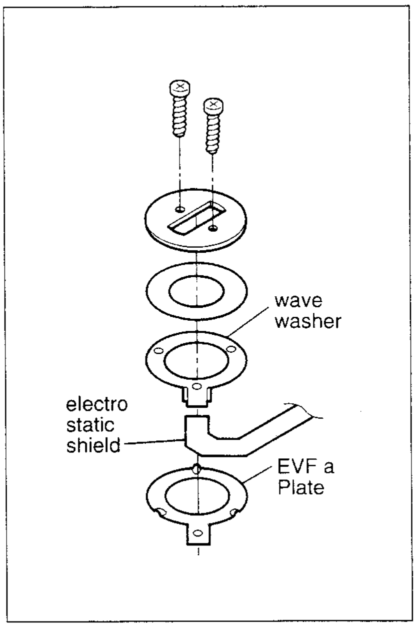
**Important :**

**1. Leads of VTR PCB ASSY (Trigger bottom side)**

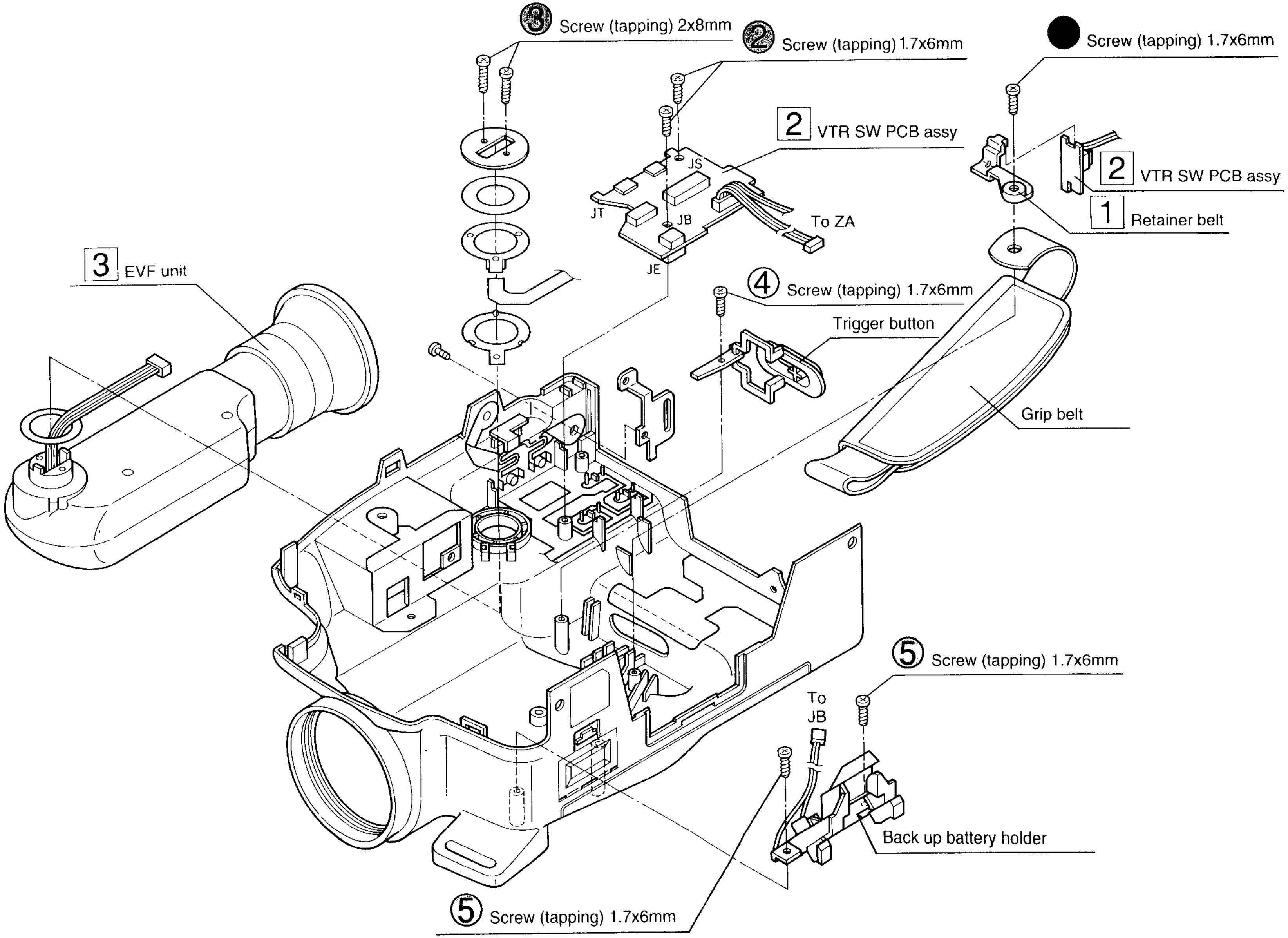

Trigger button
VTR SW PCB assy
(Trigger button side)
leads
Retainer belt
Case unit
(Left)

Put leads of VTR PCB ASSY (Trigger bottom side) between a rib of the trigger bottom and a retainer belt, and Case unit (L).

**2. Attaching EVF Unit**


wave
washer
electro
static
shield
EVF a
Plate

Attach the EVF unit while putting electrostatic shield taped on the Case unit (L) between a wave washer and EVF a plate.
The convex side of the wave washer and EVF plate must be toward the upper side.


③ Screw (tapping) 2x8mm
② Screw (tapping) 1.7x6mm
● Screw (tapping) 1.7x6mm
2 VTR SW PCB assy
JS
JT
JB
JE
To ZA
2 VTR SW PCB assy
1 Retainer belt
3 EVF unit
④ Screw (tapping) 1.7x6mm
Trigger button
Grip belt
⑤ Screw (tapping) 1.7x6mm
To JB
Back up battery holder
⑤ Screw (tapping) 1.7x6mm

## 4. Disassembling Power knob of the Case unit (R)

| Order | 1 | 2 |
|---|---|---|
| Article name | Power SW PCB assy | Power knob |
| Symbol of removed No. | ● | |
| Screw & Terminal to be removed | Screw-1pc. | |

## 5. Disassembling Eject knob of the Case unit (R)

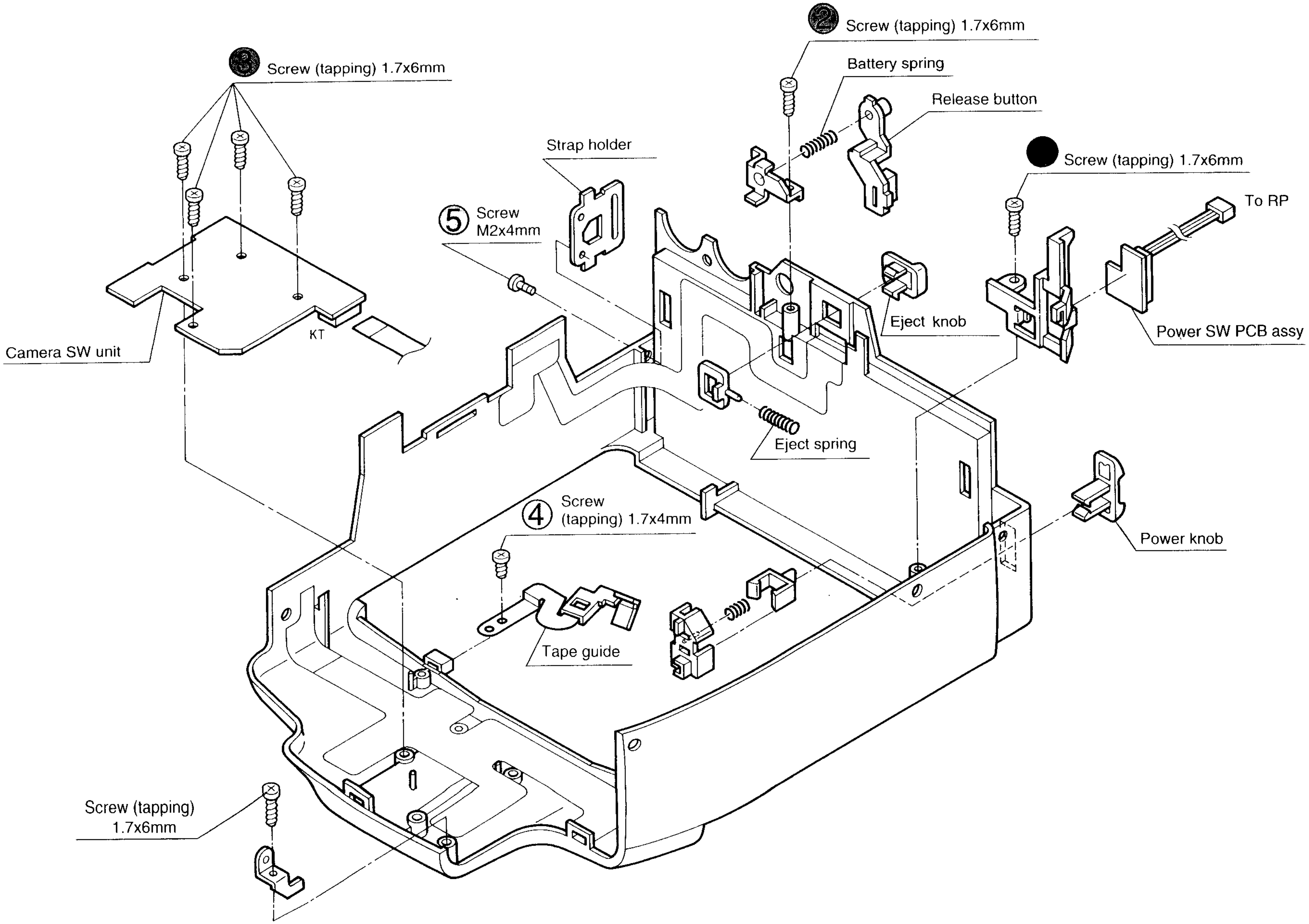
| Order | 1 | 2 |
|---|---|---|
| Article name | Eject spring | Eject knob |
| Symbol of removed No. | | |
| Screw & Terminal to be removed | | |

## 6. Disassembling Release button of the Case unit (R)

| Order | 1 | 2 |
|---|---|---|
| Article name | Battery spring | Release button |
| Symbol of removed No. | ❷ | |
| Screw & Terminal to be removed | Screw-1pc. | |

## 7. Disassembling Other parts of the Case unit (R)

| Order | Possible in no order of these items | | |
|---|---|---|---|
| Article name | Camera SW unit | Tape guide | Strap holder |
| Symbol of removed No. | ❸ | ④ | ⑤ |
| Screw & Terminal to be removed | Screws-4pcs.<br>Terminal-KT | Screw-1pc. | Screw-1pc. |


❷ Screw (tapping) 1.7x6mm
❸ Screw (tapping) 1.7x6mm
Battery spring
Release button
● Screw (tapping) 1.7x6mm
Strap holder
To RP
⑤ Screw M2x4mm
Eject knob
Power SW PCB assy
KT
Camera SW unit
Eject spring
④ Screw (tapping) 1.7x4mm
Power knob
Tape guide
Screw (tapping) 1.7x6mm

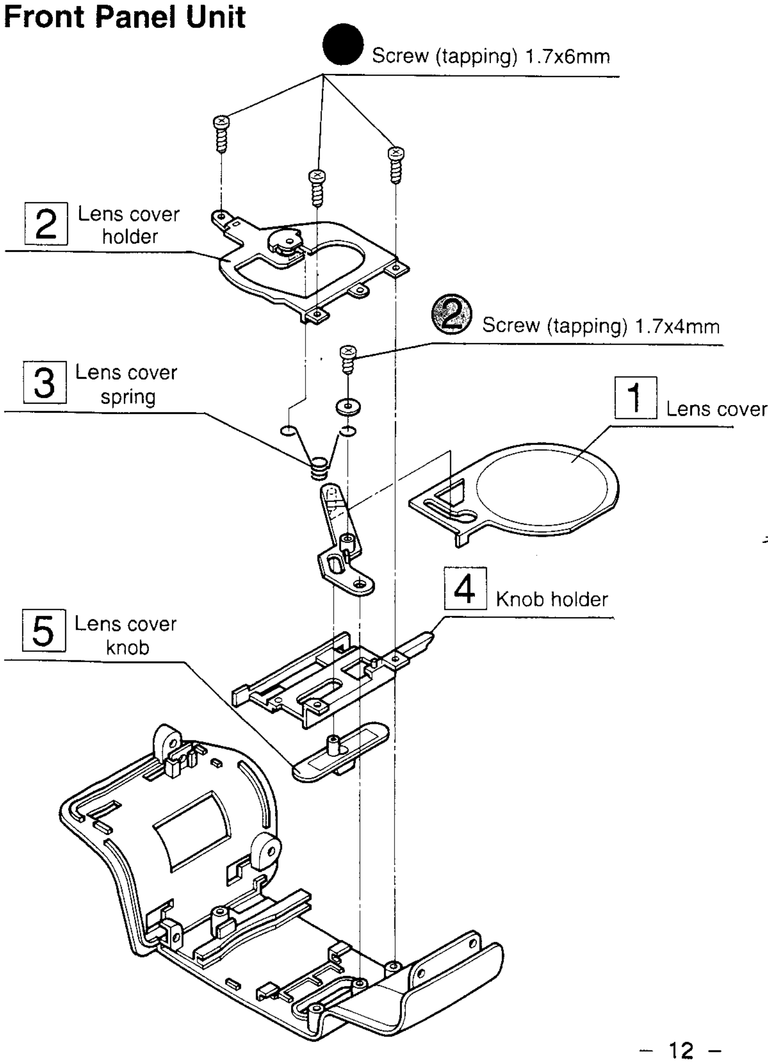
## 8. Disassembling Front Panel Unit

| Order | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Article name | Lens cover | Lens cover holder | Lens cover Spring | Knob holder | Lens cover knob |
| Symbol of removed No. |  | ● | ❷ |  |  |
| Screw & Terminal to be removed |  | Screws - 3pcs. | Screw - 1pc. |  |  |

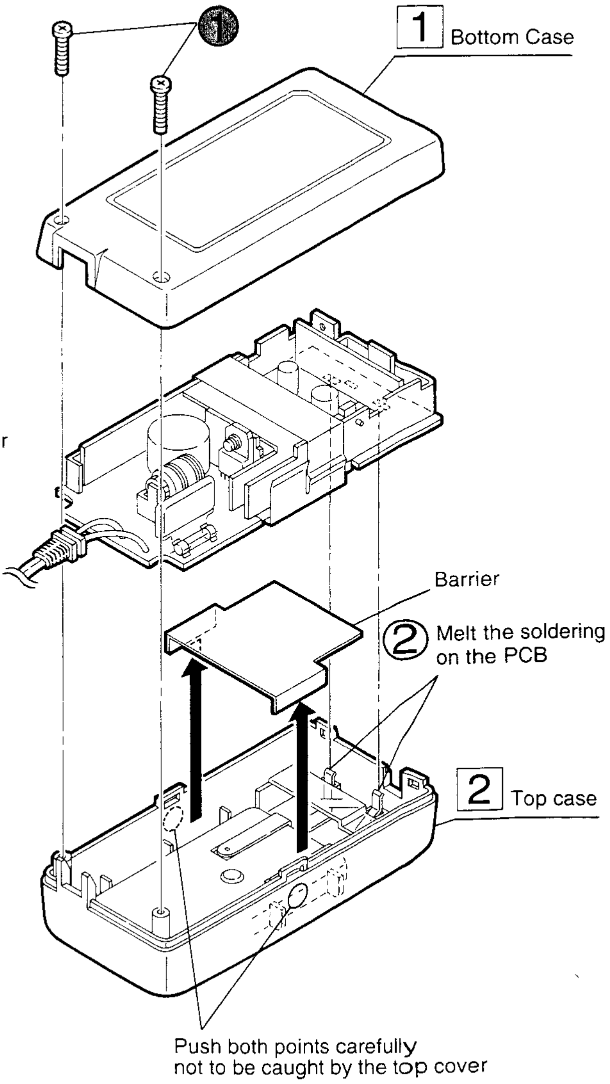
## 9. Disassembling AC Power Adapter

| Order | 1 | 2 |
|---|---|---|
| Article name | Top cover | Bottom cover |
| Symbol of removed No. | ❶ | ② |
| Screw & Terminal to be removed | Screws - 2pcs. | Soldering - 2points points |

### Front Panel Unit


● Screw (tapping) 1.7x6mm
2 Lens cover holder
❷ Screw (tapping) 1.7x4mm
3 Lens cover spring
1 Lens cover
4 Knob holder
5 Lens cover knob

### AC Power Adapter

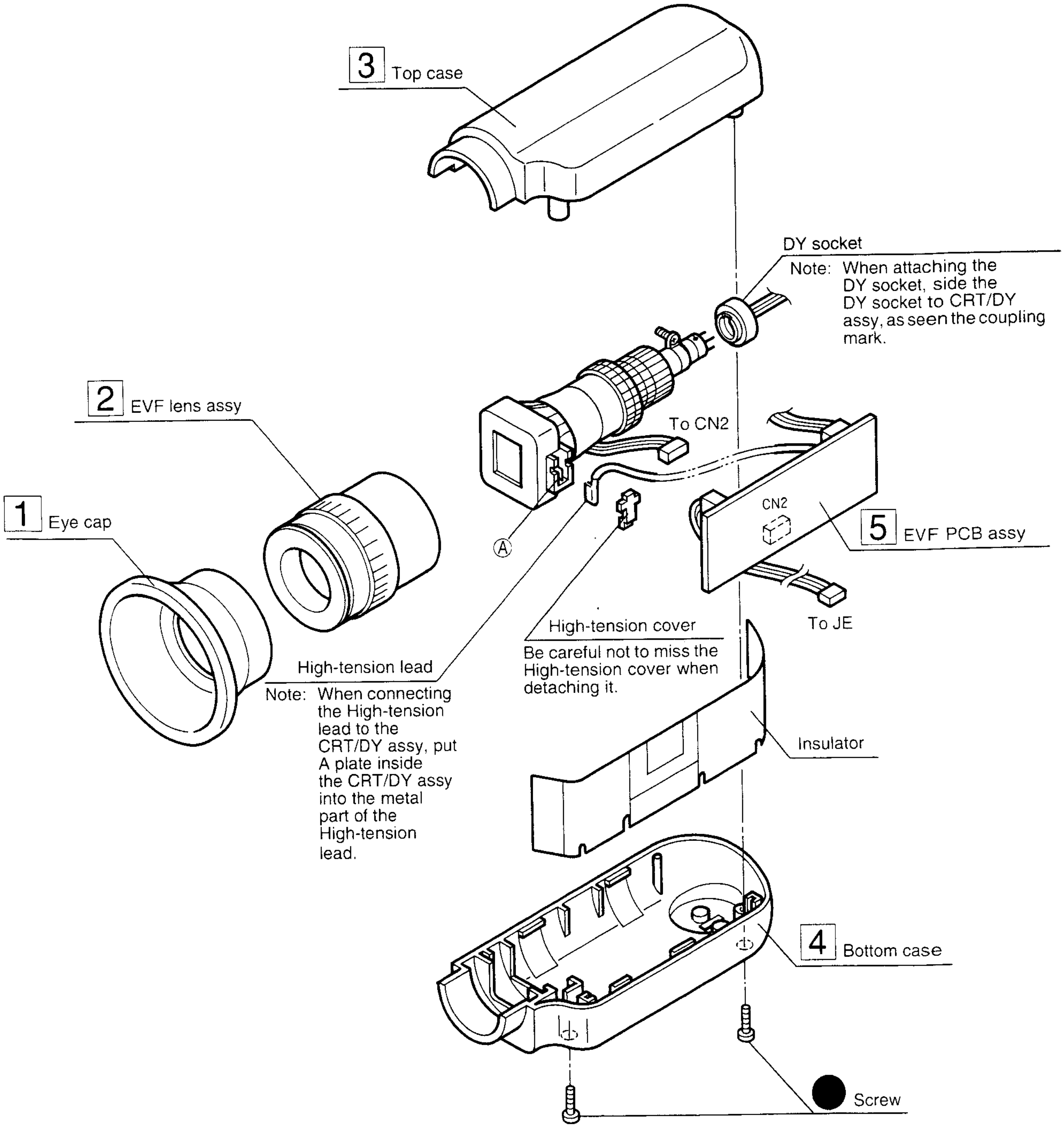

❶
1 Bottom Case
Barrier
2 Top case

② Melt the soldering on the PCB

Push both points carefully not to be caught by the top cover

## 10. Disassembling EVF Unit

| Order | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Article name | Eye cap | EVF lens assy | Top case | Bottom case | EVF PCB assy |
| Symbol of removed No. |  |  | ● |  |  |
| Screw & Terminal to be removed |  |  | Screws - 2pcs. |  | Terminal - High - tension lead, DY socket CN2 |


3 Top case
DY socket
2 EVF lens assy
To CN2
1 Eye cap
CN2
5 EVF PCB assy
Ⓐ
High-tension cover
To JE
High-tension lead
Insulator
4 Bottom case
● Screw

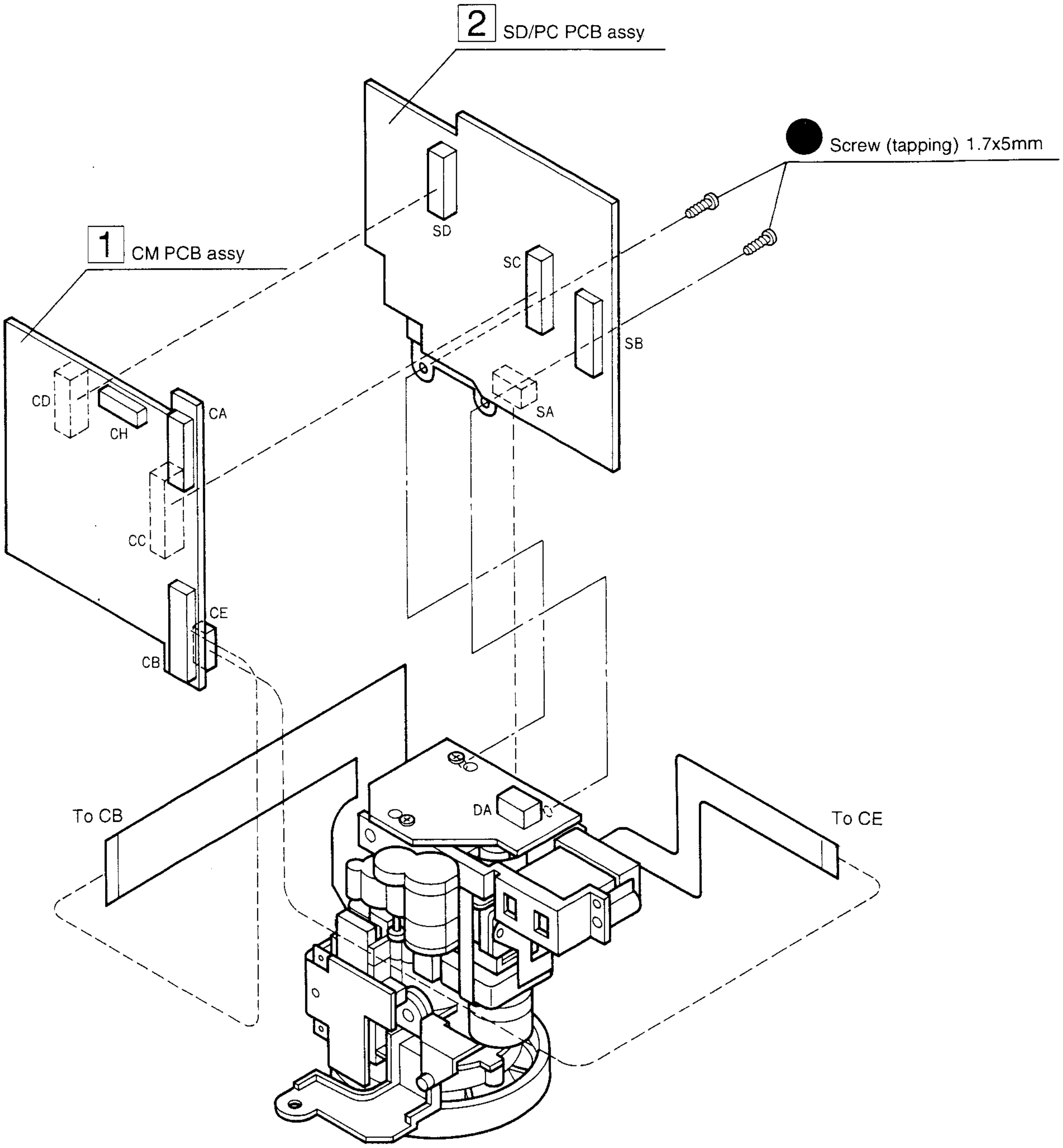
Note: When attaching the DY socket, side the DY socket to CRT/DY assy, as seen the coupling mark.

Be careful not to miss the High-tension cover when detaching it.

Note: When connecting the High-tension lead to the CRT/DY assy, put A plate inside the CRT/DY assy into the metal part of the High-tension lead.

## 11. Disassembling Camera Unit

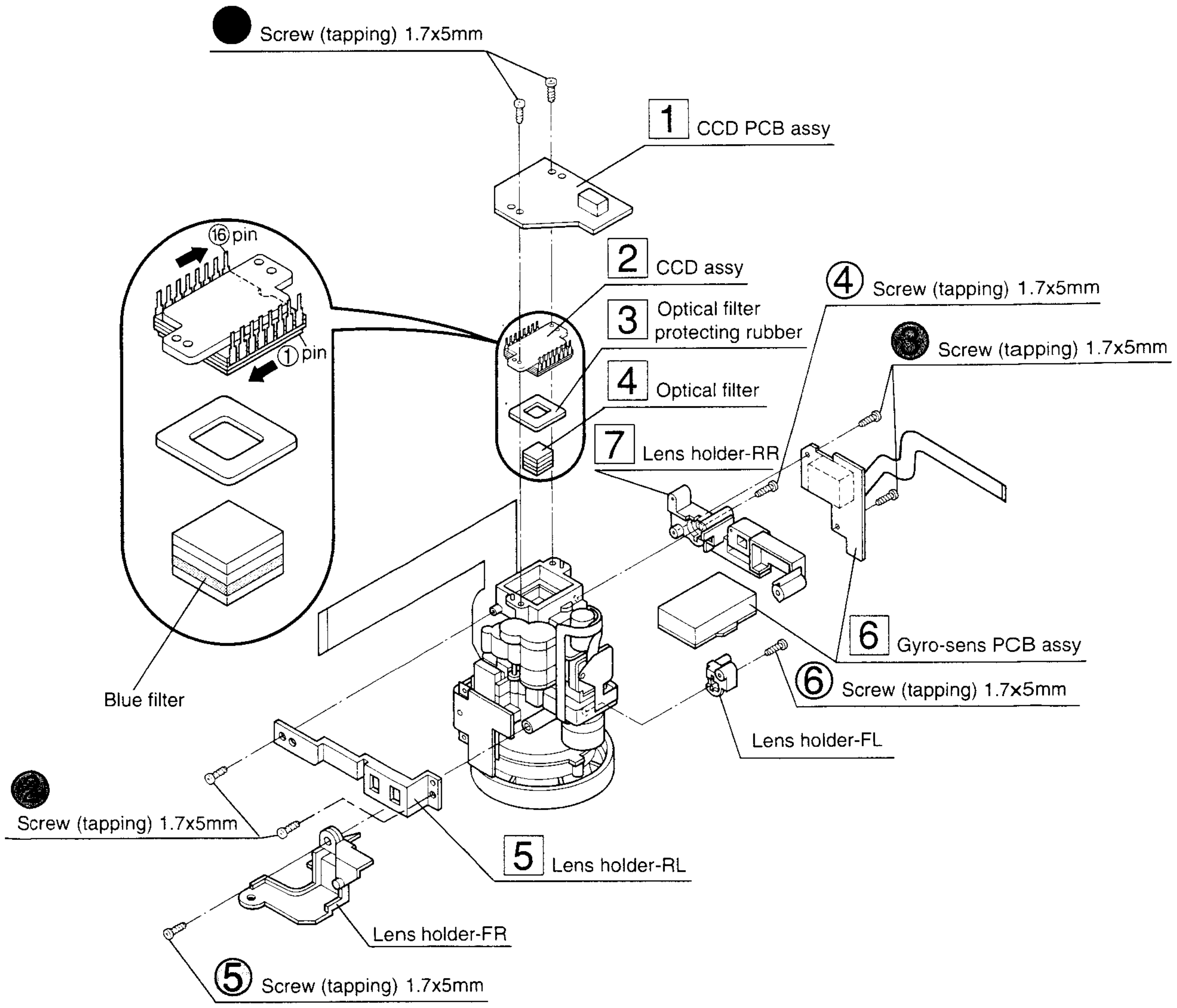
| Order | 1 | 2 |
|---|---|---|
| Article name | CM PCB assy | SD/PC PCB assy |
| Symbol of removed No. | | ● |
| Screw & Terminal to be removed | Terminals-<br>CB, CC, CD, CE | Screws-2pcs.<br>Terminal-SA |


2 SD/PC PCB assy
Screw (tapping) 1.7x5mm
SD
SC
SB
SA
1 CM PCB assy
CD
CH
CA
CC
CE
CB
To CB
To CE
DA

## 12. Disassembling Lens Unit

| Order | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Article name | CCD PCB assy | CCD assy | Optical filter protecting rubber | Optical filter | Lens holder-RL |
| Symbol of removed No. | ● |  |  |  | ❷ |
| Screw & Terminal to be removed | Screws-2pcs. |  |  |  | Screws-2pcs. |

| Order | 6 | 7 | possible in no order of these items |  |
|---|---|---|---|---|
| Article name | Gyro-sens PCB assy | Lens holder-RR | Lens holder-FR | Lens holder-FL |
| Symbol of removed No. | ❸ | ④ | ⑤ | ⑥ |
| Screw & Terminal to be removed | Screws-2pcs. | Screw-1pc. | Screw-1pc. | Screw-1pc. |


● Screw (tapping) 1.7x5mm
1 CCD PCB assy
⑯pin
①pin
2 CCD assy
3 Optical filter protecting rubber
4 Optical filter
7 Lens holder-RR
④ Screw (tapping) 1.7x5mm
❸ Screw (tapping) 1.7x5mm
6 Gyro-sens PCB assy
⑥ Screw (tapping) 1.7x5mm
Lens holder-FL
Blue filter
❷ Screw (tapping) 1.7x5mm
5 Lens holder-RL
Lens holder-FR
⑤ Screw (tapping) 1.7x5mm

## Replacing CCD Image Sensor

**Caution :**
- As the CCD image sensor is a C-MOS type semi-conductor, the soldering iron must be grounded.
- Do not soil, stain or injure the transparent glass and optical filter of the CCD image sensor.
  If the CCD image sensor should be stained by finger print, wipe it off with silicone paper or chamois skin.
- When the CCD assy in soldered onto the PCB, do not apply excessive heat for a long time. The filter may be discolored by heat.

### 1. Removing

1. Take off the CCD PCB ASSY according to the disassembling procedures.
2. Remove sixteen terminals soldered on the CCD PCB ASSY to remove the CCD assy.

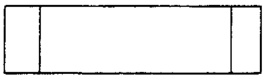
### 2. Attaching

Solder the CCD assy in the right direction on the CCD PCB ASSY.

# TABLE OF EXTENSION JIGS

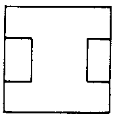
## Extension Cable (FPC)

| Connector | Parts No. |
|---|---|
| PD, PC, VS, to JS, VA to CA | 859C543020 |
| VD | 859C543010 |
| VG | 859C543040 |
| VE, VB to SB | 859C543030 |



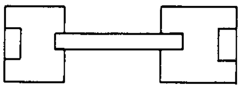
## Joint Board

| Connector | Parts No. |
|---|---|
| PD, PC | 859C544020 |
| VD | 859C544010 |
| VG | 859C544040 |
| VE | 859C544030 |

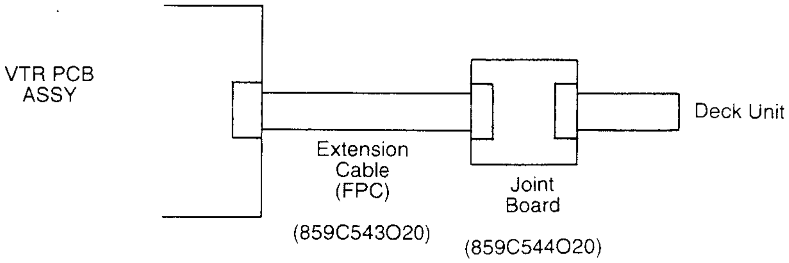


## Board to Board

| Connector | Parts No. |
|---|---|
| SD to CD | 859C545020 |
| SC to CC | 859C545030 |
| VQ to PQ, VP to PP | 859C545010 |

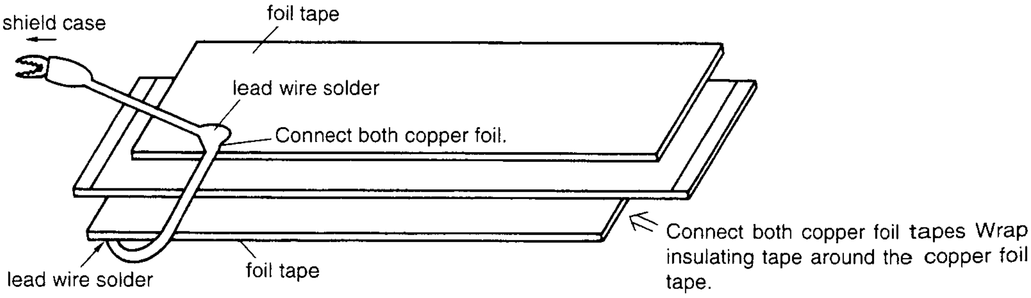


The following diagram illustrates how to connect the deck unit to the VTR PCB using the extension cable and Joint Board.


VTR PCB
ASSY
Deck Unit
Extension
Cable
(FPC)
Joint
Board
(859C543020)
(859C544020)

Processing Extension Cable (859C543040, used for VG connector)

1. Apply proper length of copper foil tape to both sides of the extension cable.
2. Connect a lead between both sides of the copper foil tape and solder it on the both sides.
3. Solder another lead with clip on one side.The lead must be connected (5 cm max) from the nearest edge of the extension cable.
4. Wrap insulating tape around the copper foil tape.


shield case
foil tape
lead wire solder
Connect both copper foil.
lead wire solder
foil tape
Connect both copper foil tapes Wrap insulating tape around the copper foil tape.

# USING EXTENSION JIGS

**Warning :**
Use and apply a Regulated power source, 6V DC.

**Camera Unit**

1. Remove the Case unit (L) and the Front panel unit from the Camera unit.
2. Remove two fixed screws from the Camera unit.
3. Replace FPC cables between VB and SB, and VA and CA with extension jigs specified in table below to install the Camera unit. (See figure in the following page.)
4. Connect extension jigs specified in table below to connectors on the CM PCB and the SD/PC PCB, between connectors CD and SD, and CC and SC.

**Note :** Do not stretch FPC cables connected to connectors CB and CE excessively.

**Extension Jigs :**

| Connector | Parts No. |
|---|---|
| VB to SB | 859C543030 |
| VA to CA | 859C543020 |

| Connector | Parts No. |
|---|---|
| CD to SD | 859C545020 |
| CC to SC | 859C545030 |

## 2. VTR PCB ASSY

**Warning:**
Do not check the VTR PCB ASSY only removed from the Deck unit for over two hours.
If checking over two hours, attach a radiating plate to transistor Q5A2.
The transistor Q5A2 may be damaged if power on over two hours without a radiating plate.

1. Disassemble this VIDEO CAMERA/RECORDER according to disassembling procedures. Allocate each of the units or components. (See figure in the following page.)
2. Remove the Microphone unit and the Power switch from the Front panel switch to allocate them. (See figure in the following page.)
3. Connect the Deck unit to the VTR PCB ASSY with extension jigs shown in table below, connected to FPC cables.

**Extension Jigs:**

| Connector | Parts No. |
|---|---|
| VG | 859C543040 , 859C544040 |
| VE | 859C543030 , 859C544030 |
| VD | 859C543010 , 859C544010 |

| Connector | Parts No. |
|---|---|
| PC | 859C543020 , 859C544020 |
| PD | 859C543020 , 859C544020 |
| VS-JS | 859C543020 |

**Note :** To minimize noise, wrap type No. 5 extension cable with copper foil sheet and connect it to a shielded case of the VTR PCB ASSY.

4. Connect the Deck unit to the shielded case with a lead, whose outer diameter of conductor is 0.76 mm min.
5. Connect each lead from the Loading motor and the Camera SW ASSY on the VTR PCB ASSY to connectors VL and VF on the Deck unit respectively.
6. Connect the VTR-SUB PCB ASSY to the VTR PCB ASSY with extension jigs shown in table below.

**Extension Jigs:**

| Connector | Parts No. |
|---|---|
| VP to PP | 859C545010 |
| VQ to PQ | 859C545010 |

| Connector | Parts No. |
|---|---|
| PC | 859C543020 , 859C544020 |
| PD | 859C543020 , 859C544020 |

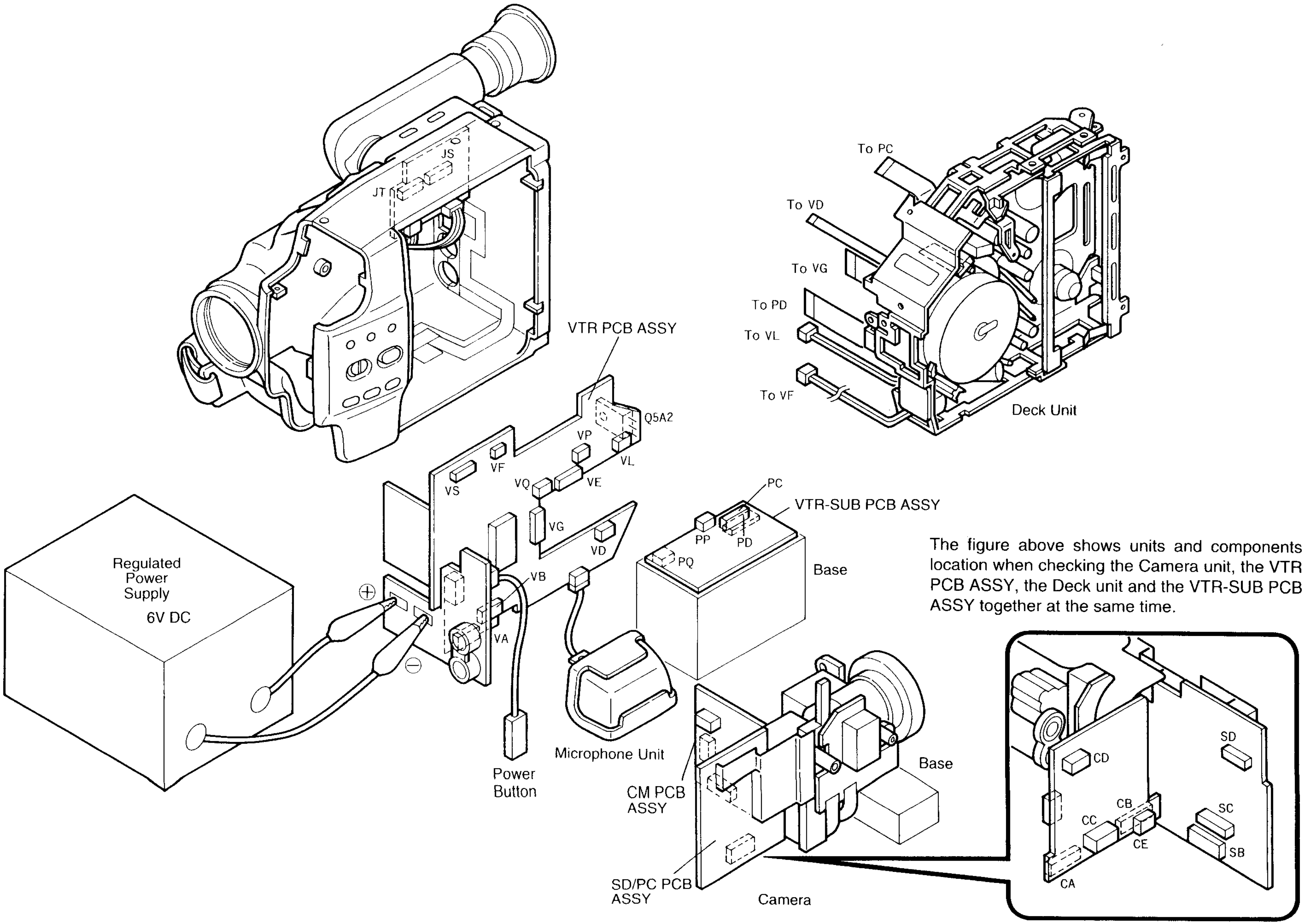
**Note :** Put the VTR-SUB PCB ASSY onto a insulated table without crossing any extension jigs and the FPC cable of the drum, as noise will occur in the signal of the drum.

**Deck Unit**

1. Perform items 1 and 2 of "Camera unit" above.
2. Perform items 2, 3, 4 and 5 of "VTR PCB ASSY" above.

**VTR-SUB PCB ASSY**

1. Perform items 1, 2 and 3 of "Camera unit" above.
2. Perform item 6 only of "VTR PCB ASSY" above.

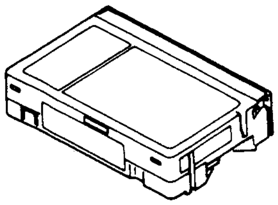
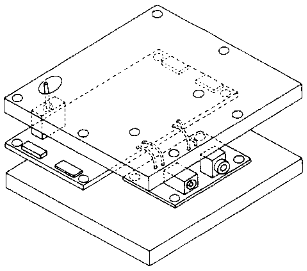
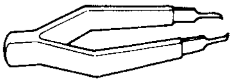

JS
JT
VTR PCB ASSY
Q5A2
VP
VL
VF
VS
VQ
VE
VG
VD
VB
VA
Regulated Power Supply
6V DC
⊕
⊖
Power Button
Microphone Unit
PC
VTR-SUB PCB ASSY
PP
PD
PQ
Base
To PC
To VD
To VG
To PD
To VL
To VF
Deck Unit
CM PCB ASSY
SD/PC PCB ASSY
Camera
Base
CD
SD
CC
CB
CE
SC
SB
CA

The figure above shows units and components location when checking the Camera unit, the VTR PCB ASSY, the Deck unit and the VTR-SUB PCB ASSY together at the same time.

# Adjusting VCR Unit Circuit

## 1. Jigs and Measuring Instruments

### 1-1 Jigs

| Alignment Tape | Video Signal Input Jig | Pincers for Mini-connectors |
|---|---|---|
| See NOTE 1 | 859C398070 | 859C395030 |
|  |  |  |

**NOTE 1**
PC1KC (N-VHS Colour Bar) :859C397070
PC1KCS (S-VHS Colour Bar) :859C397080
PM6KE2CS (N-VHS 3H Monoscope) :859C397060
PM3KE6(CH1)C (N-VHS 6H Monoscope) :859C399040
PMXC (N-VHS 3H Monoscope) :859C399050

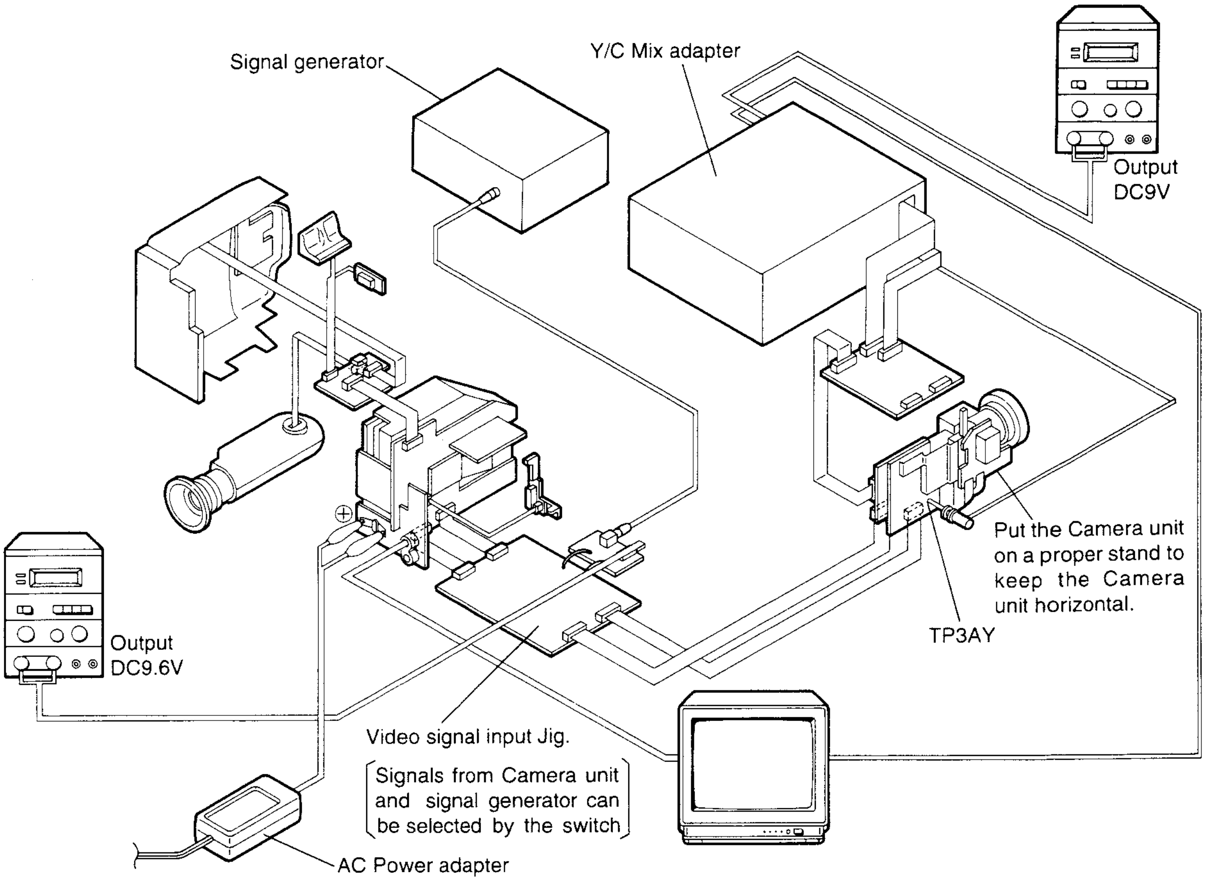
### 1-2 Tools and Measuring Instruments

1. Colour monitor (Colour TV: Use a monitor having two or more video input terminals.)
2. Oscilloscope
3. Colour bar generator
4. Frequency counter
5. Full set of general electric tools
6. Audio generator
7. Digital voltmeter
8. Carrier checker
9. Small screwdriver
10. Vector scope
11. Y/C Mix Adapter (859C398090)

## 2. Precaution

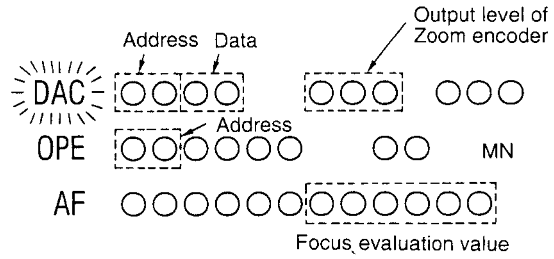
VCR unit circuit often needs adjustment after replacing mechanical parts or the video heads.
If the electrical circuit is defective, locate the defective part using some appropriate instruments and repair or replace, and then adjust it.
Do not fiddle with any controls without verifying the cause of trouble.
Do not perform all adjustments, only adjust those pertaining to a specific problem.
When recording or playing, connect EVF to input V-SYNC to JE connector.

## 3. Standard Location and Connection


Signal generator
Y/C Mix adapter
Output
DC9V
Output
DC9.6V
Put the Camera unit on a proper stand to keep the Camera unit horizontal.
TP3AY
Video signal input Jig.
Signals from Camera unit and signal generator can be selected by the switch
AC Power adapter

Note: Use the video signal input tool for inputting video signal.

## 4. Adjusting electronic volume withY/C Mix adapter


Address
Data
Output level of Zoom encoder
DAC
OOOO
OOO
OOO
Address
OPE
OOOOOO
OO
MN
AF
OOOOOOOOOOOO
Focus evaluation value

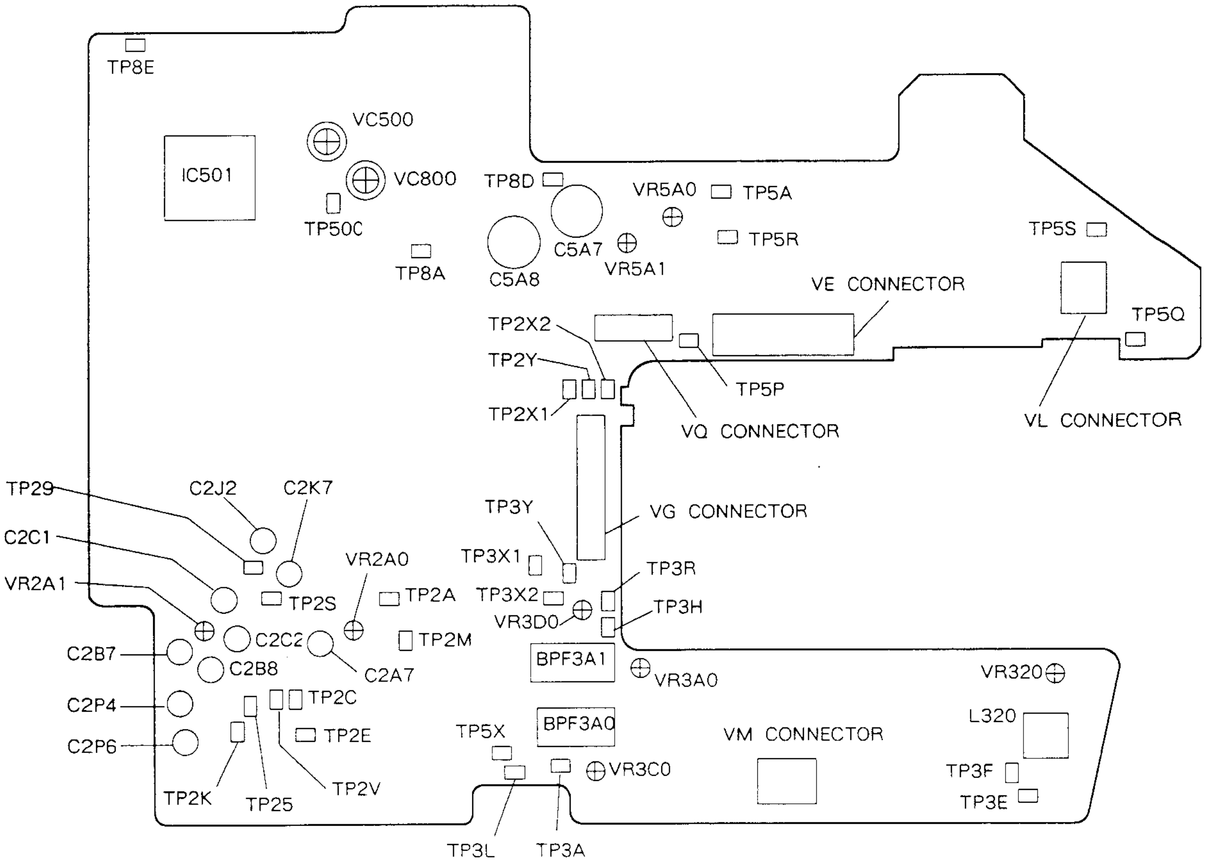
- Electronic volume adjustment requires connection of the Y/C Mix adapter.
- When displaying video output signal on a monitor, watch the display, shown in left figure, at the bottom on the screen.
  You should adjust electronic volume, watching this display on the screen.

### 4-1 Adjusting DAC Address

1. Turn EEPROM switch to WRITE side.
2. Press OPE•DAC button to blink "DAC" display.
3. Two-digit hexadecimal numbers displayed to the right of the "DAC" display shows the current address of DAC.
   When changing address number, press ADDRESS switch to (+) or (–) side once so that the number of address increases ±1, or keep pressing for continual change.
4. Two-digit hexadecimal numbers displayed to the right of the numbers of DAC address shows the content (data) of the current DAC address.
   When changing data of address, DATA switch to (+) or (–) side once so that the number of data increases 1, or keep pressing for continual change.
5. Press ADDRESS switch to (+) or (–) side to write the data to EEPROM.

# Location of Adjustment Points (VCR Section)

## PCB VTR (COMPONENT SIDE)


TP8E
IC501
VC500
VC800
TP50C
TP8A
TP8D
C5A8
C5A7
VR5A0
VR5A1
TP5A
TP5R
TP5S
VE CONNECTOR
TP5Q
TP2X2
TP2Y
TP2X1
TP5P
VQ CONNECTOR
VL CONNECTOR
TP29
C2J2
C2K7
C2C1
VR2A1
VR2A0
TP3Y
TP3X1
VG CONNECTOR
TP3R
TP2S
TP2A
TP3X2
TP3H
VR3D0
C2B7
C2C2
C2B8
C2A7
TP2M
BPF3A1
VR3A0
VR320
C2P4
TP2C
TP2E
TP5X
BPF3A0
L320
VM CONNECTOR
C2P6
VR3C0
TP3F
TP3E
TP2K
TP25
TP2V
TP3L
TP3A

**Note:** Unless otherwise instructed, ground the head amp to the shield case.

**[Power Supply Circuit]**
1. Power Supply Voltage

**Adjustment purpose:** Setting power supply voltage of VCR and camera.

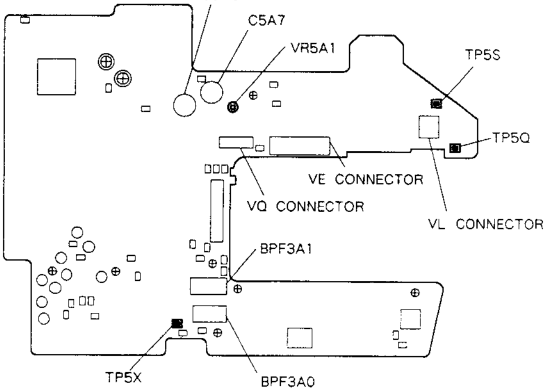
**Symptom when incorrectly adjusted:** Malfunction.

| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| D.V.M | | Input signal | Video signal (of camera out) |
| Test point | Positive : TP5Q<br>Negative : TP5S | Using tape | A tape (VHS) |
| EXT trigger | — | VCR condition | SP REC (VHS) |
| Measurement range | — | Using jig. | — |

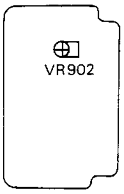
**Warning :** Turn VR5A1 and VR902 to the mechanical centre point and power on.

1. Set a VCR to VHS mode.
2. Adjust VR5A1 so that the D.V.M is at 5.00±0.03V.
3. Connect the positive of D.V.M to TP5X.
4. Adjust VR902 so that the D.V.M is at 8.50 ±0.03 V.

**PCB VTR**


C5A8
C5A7
VR5A1
TP5S
TP5Q
VE CONNECTOR
VQ CONNECTOR
VL CONNECTOR
BPF3A1
TP5X
BPF3A0

**PCB VTR-SUB**



**[Servo Circuit]**
2. Playback Switching Point

**Adjustment purpose:** Video Head switch timing during playback.

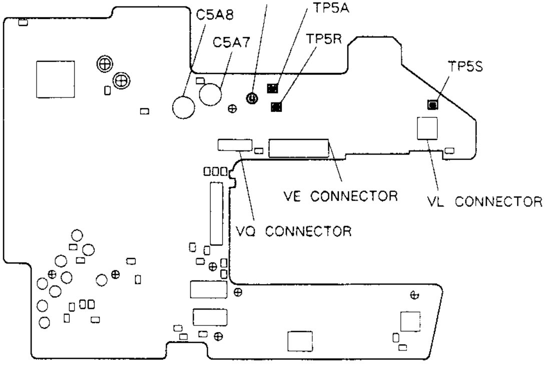
**Symptom when incorrectly adjusted:** Switching noise or jitter on the picture during playback.

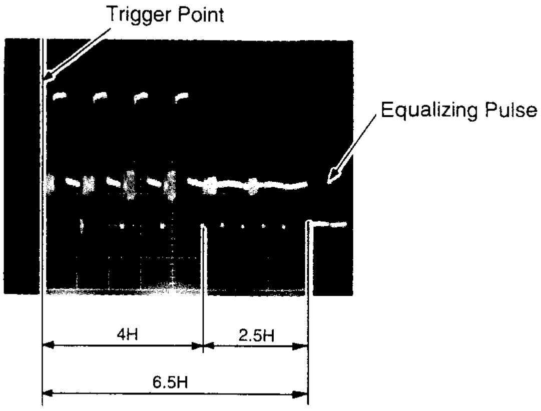
| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 10:1) | | Input signal | — |
| Test point | AV OUT terminal (Video out) | Using tape | VHS Alignment tape (Colour bar) |
| EXT trigger | TP5A | VCR condition | SP Play back |
| Measurement range | DIV : 20 mV<br>TIM : 50 µs | Using jig. | — |

1. Connect TP5R to TP5S.
2. Set the oscilloscope's slope to (–).
3. Adjust VR5A0 so that the trigger point is located at 6.5 ± 1.0 H before the vertical synchronizing signal.

Note: To recover digital tracking disconnect TR5R from TP5S and then turn off power.

**PCB VTR**


VR5A0
C5A8
TP5A
C5A7
TP5R
TP5S
VE CONNECTOR
VL CONNECTOR
VQ CONNECTOR



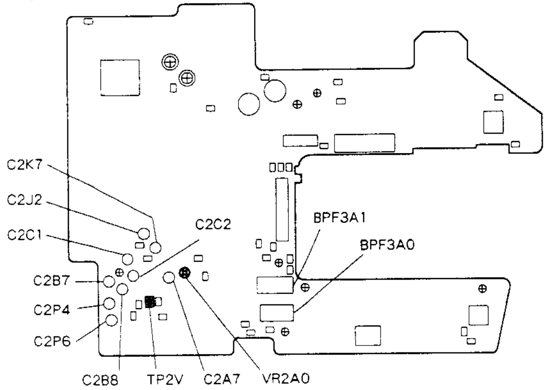
| | |
|---|---|
| **[Y/C Signal Circuit]**<br>3. L.P.F Cut-Off Frequency | **Adjustment purpose:** Bandwidth of Low Pass Filter frequency to reject unnecessary signal during REC or PB.<br>**Symptom when incorrectly adjusted:** Soft picture or poor S/N. |

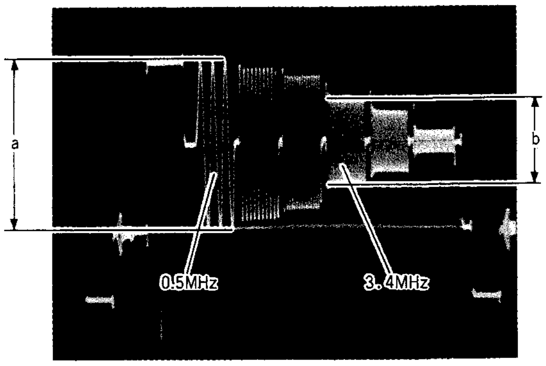
| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 10:1) | | Input signal | Multiple burst |
| Test point | TP2V | Using tape | A tape (VHS) |
| EXT trigger | — | VCR condition | LP REC (VHS) |
| Measurement range | DIV : 10mV<br>TIM : Variable | Using jig. | — |

1. Set a VCR to VHS mode.
2. Input Mulitiburst signal.
3. When mulitiburst signal amplitude at 0.5MHz is "a" and "b" at 3.4MHz, adjust VR2A5 for b/a = 0.4, as shown below.

Note: Some signal generator cannot provide correct 3.4MHz signal.
Signal at 3.4 ± 0.3MHz may be permitted.
For location of the 3.4MHz signal, refer to the operation manual.

**PCB VTR**



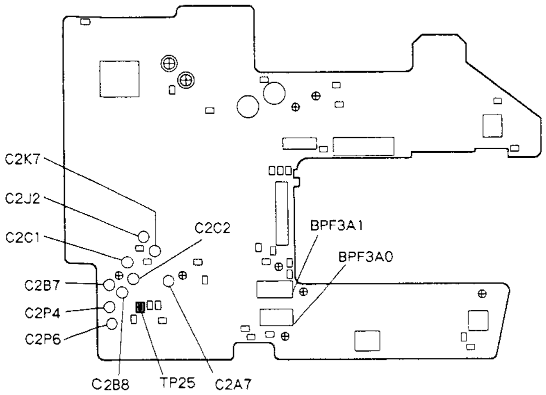


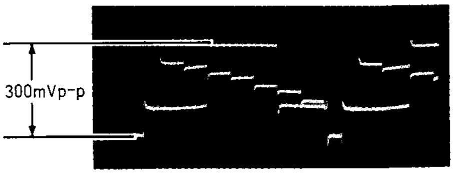
| | |
|---|---|
| 4. Signal Level | **Adjustment purpose:** Input level of emphasizer during recording in VHS mode.<br>**Symptom when incorrectly adjusted:** Poor sharpness of picture, white or black streaking. |

| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 10:1) | | Input signal | Split field stair step |
| Test point | TP25 | Using tape | A tape (S-VHS) |
| EXT trigger | — | VCR condition | LP REC (S-VHS) |
| Measurement range | DIV : 10 mV<br>TIM : 10 µs | Using jig. | — |

1. Set a VCR to S-VHS mode.
2. Set DAC address to 1E.
3. Adjust data of DAC address (1E) so that the amplitude of oscilloscope's waveform is 300 mVp-p.
4. Set a VCR to VHS mode.
5. Set DAC address to 1F.
6. Adjust data of DAC address (1F) so that the amplitude of oscilloscope's waveform is 300 mVp-p.

**PCB VTR**



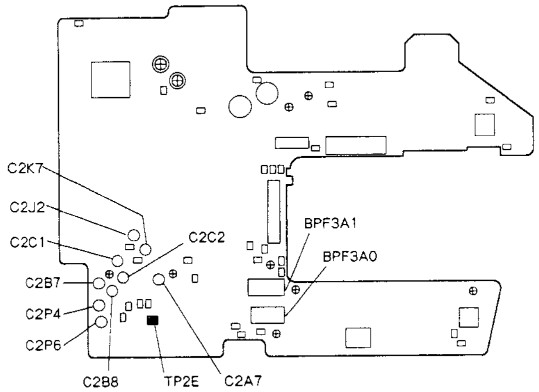


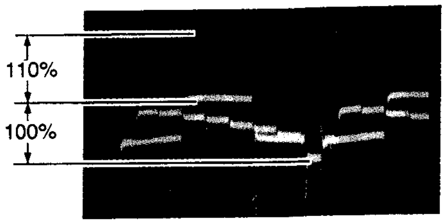
| 5. White Clip | **Adjustment purpose:** Improve picture sharpness.<br>**Symptom when incorrectly adjusted:** Poor sharpness of picture, white or black streaking. |
|---|---|

| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 10:1) | | Input signal | Split field stair step |
| Test point | TP2E | Using tape | A tape (S-VHS) |
| EXT trigger | — | VCR condition | LP REC (S-VHS) |
| Measurement range | DIV : 10 mV (Variable)<br>TIM : 10 µs | Using jig. | — |

1. Set a VCR to S-VHS mode.
2. Set DAC address to 20.
3. Adjust data of DAC address (20) so that overshoot of first transition in 100 % white area is 110%, where range from sync tip to white peak is assumed as 100 %.

**PCB VTR**

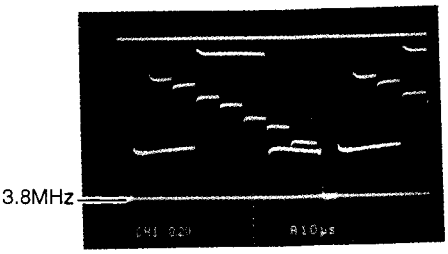




| 6. Carrier Set, Deviation | **Adjustment purpose:** FM carrier frequency and frequency deviation.<br>**Symptom when incorrectly adjusted:** Too bright or too dark picture. Poor colour bar display, horizontal noise or out of sync. |
|---|---|

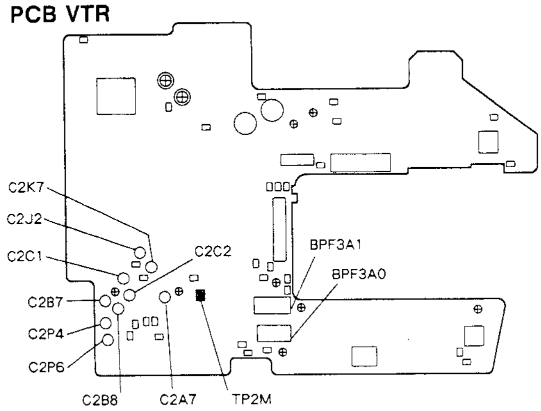
| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 1:1) | | Input signal | Split field stair step |
| Test point | TP2M | Using tape | A tape (S-VHS) |
| EXT trigger | TP2S | VCR condition | LP REC (VHS) |
| Measurement range | DIV : 0.2 V<br>TIM : 10 µs | Using jig. | Carrier checker |

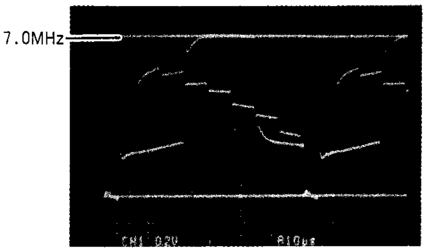
1. Set a VCR to VHS mode.
2. Observe TP2M via carrier checker.
3. Set DAC address to 25.
4. Adjust data of DAC address (25) so that frequency of sink tip is 3.8 MHz.

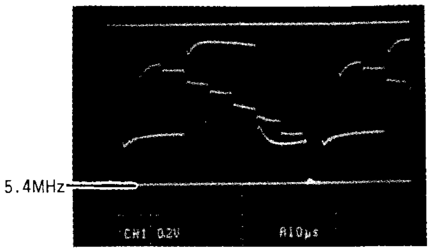


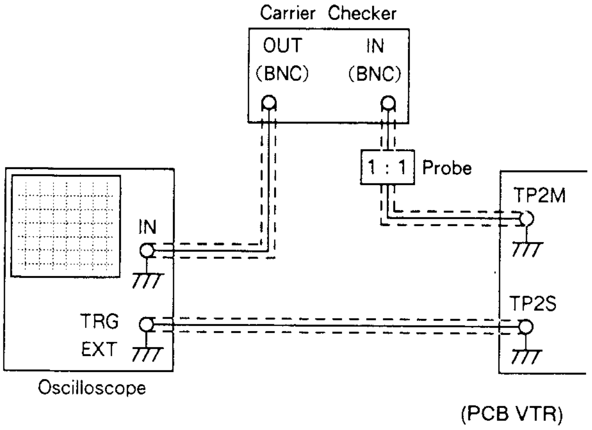
5. Set the VCR to S-VHS mode.
6. Set DAC address to 23.
7. Adjust data of DAC address (23) so that frequency of Sync tip is 5.4 MHz.

**PCB VTR**




7.0MHz
CH1 0.2V
A10µs


5.4MHz
CH1 0.2V
A10µs


Carrier Checker
OUT (BNC)
IN (BNC)
1 : 1 Probe
IN
TRG EXT
Oscilloscope
TP2M
TP2S
(PCB VTR)

8. Adjust data of DAC address (1D) so that frequency of white peak is 7.0 MHz.

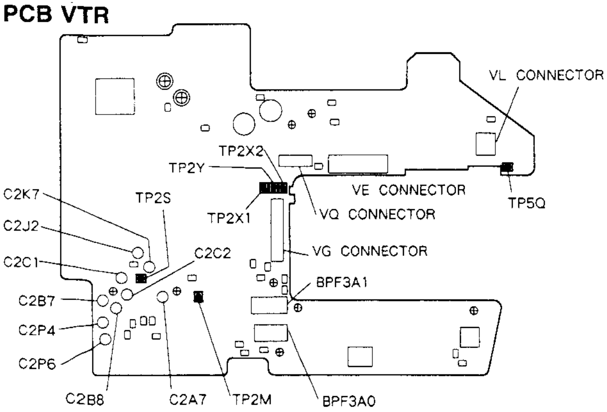
| | |
|---|---|
| 7. Chrominance Signal Recording Level | **Adjustment purpose:** Chrominance signal level during recording.<br>**Symptom when incorrectly adjusted:** Colour impurity or flicker of colour bars. |

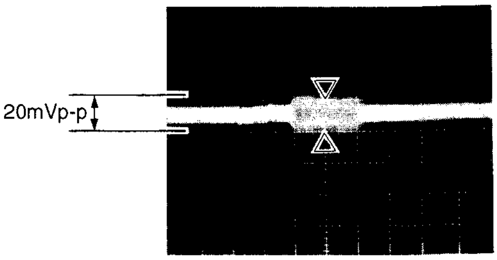
| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 10:1) | | Input signal | Video signal (of camera out) |
| Test point | TP2Y<br>(GND : TP2X2) | Using tape | A tape (VHS) |
| EXT trigger | TP2S | VCR condition | LP REC (VHS) |
| Measurement range | DIV : 5 mV<br>TIM : 2 µs | Using jig. | — |

*This adjustment must be performed after finishing adjustments of all chroma signal processing circuit of the camera unit.

1. Set a VCR to VHS mode.
2. Connect TP2M to TP5Q.
3. Connect TP2X1 to TP2X2 via a capacitor (0.1µF).
4. Shade the camera's lens.
5. Set DAC address to 1C.
6. Adjust data of DAC address (1C) so that the minimum amplitude of burst is 20 mVp-p.

**PCB VTR**


VL CONNECTOR
TP2X2
TP2Y
VE CONNECTOR
C2K7
TP2S
TP5Q
TP2X1
VQ CONNECTOR
C2J2
C2C1
C2C2
VG CONNECTOR
BPF3A1
C2B7
C2P4
C2P6
C2B8
C2A7
TP2M
BPF3A0

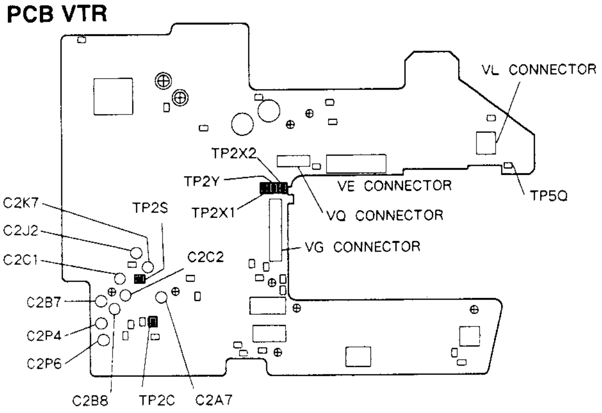


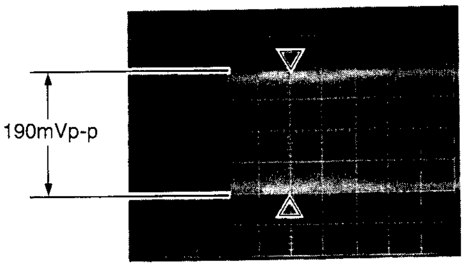
| | |
|---|---|
| 8. Luminance Signal Recording Level | **Adjustment purpose:** Luminance signal level during recording.<br>**Symptom when incorrectly adjusted:** Lower luminance S/N or beat pattern. |

| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 10:1) | | Input signal | Split field stair step |
| Test point | TP2Y<br>(GND : TP2X2) | Using tape | A tape (S-VHS) |
| EXT trigger | TP2S | VCR condition | LP REC (S-VHS) |
| Measurement range | DIV : 5 mV<br>TIM : 2 µs | Using jig. | — |

1. Set a VCR to S-VHS mode.
2. Connect TP2C to TP5Q through a resistance (1kΩ).
3. Connect TP2X1 to TP2X2 via a capacitor (0.1µF).
4. Set DAC address to 21.
5. Adjust data of DAC address (21) so that the amplitude of horizontal sync is 190 mVp-p.

**PCB VTR**

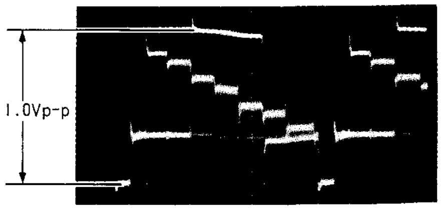




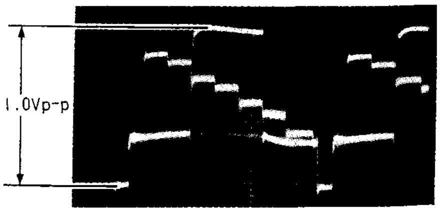
| | |
|---|---|
| 9. Playback Level | **Adjustment purpose:** Video output level during playback .<br>**Symptom when incorrectly adjusted:** Poor colour bar display. |

| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 10:1) | | Input signal | — |
| Test point | Y- OUT of S-terminal | Using tape | S-VHS Alignment tape (colour bar) |
| EXT trigger | — | VCR condition | SP Playback (S-VHS) |
| Measurement range | DIV : 20 mV<br>TIM : 10 µs | Using jig. | — |

1. Terminate the luminance signal output terminal at 75 Ω.
2. Set DAC address to 22.
3. Adjust data of DAC address (22) so that the amplitude of waveform is 1.0 Vp-p.
4. Set DAC address to 24.
5. Play a VHS alignment tape (color bar).
6. Adjust data of DAC address (24) so that the amplitude of waveform is 1.0 Vp-p.



S-VHS mode



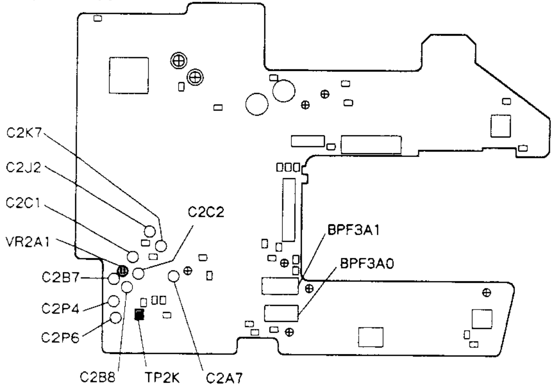
VHS mode

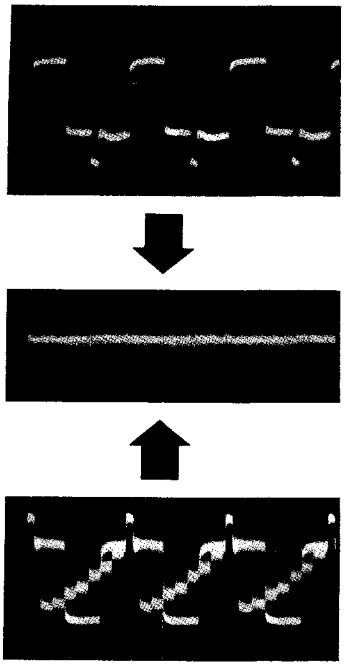
| | |
|---|---|
| 10. CCD Level | **Adjustment purpose:** Setting gain of Noise reduction circuit.<br>**Symptom when incorrectly adjusted:** Lower video signal S/N. |

| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 10:1) | | Input signal | — |
| Test point | TP2K | Using tape | VHS alignment tape (colour bar) |
| EXT trigger | — | VCR condition | SP Playback (VHS) |
| Measurement range | DIV : 10 mV<br>TIM : 20 µs | Using jig. | — |

1. Adjust VR2A1 so that the amplitude of waveform is the minimum.

**PCB VTR**





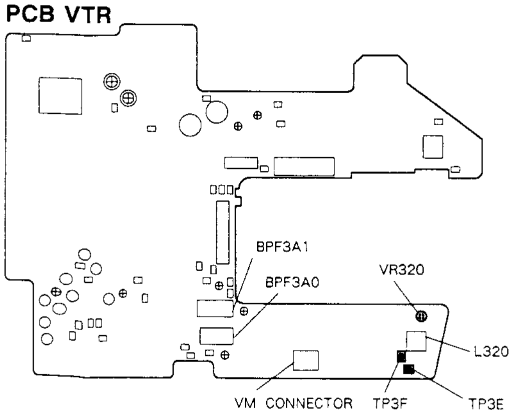
| | |
|---|---|
| **[Normal Audio Circuit]**<br>11. Audio Bias Level | **Adjustment purpose:** Audio bias level during recording.<br>**Symptom when incorrectly adjusted:** Poor audio response in high frequency area. |

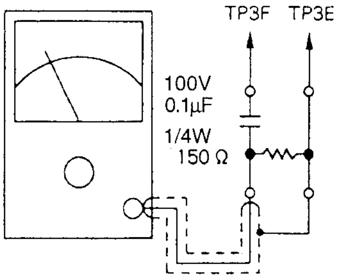
| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Audio Tester | | Input signal | Stair step |
| Test point | TP3E<br>TP3F | Using tape | A tape (VHS) |
| EXT trigger | — | VCR condition | SP REC (VHS) |
| Measurement range | — | Using jig. | High pass filter |

1. Set a VCR to VHS mode.
2. Connect an electrolytic capacitor (16 V min./10 µF) between pin Nos. 1 and 3, and Nos. 2 and 3 of VM connector so that pin No. 3 is negative.
3. Observe TP3E and TP3F with high pass filter.
4. Confirm no influence on precision of the audio tester from monitors or TV set, and adjust VR320 so that the audio tester is at 2.4 mVrms.

**Warnings :** Do not contact the audio tester with a VCR. Never play a tape when the audio tester is connected to the VCR. (The audio amplifier will be overloaded.)

**PCB VTR**





**[Hi-Fi Audio Circuit]**

## 12. Oscillating Frequency

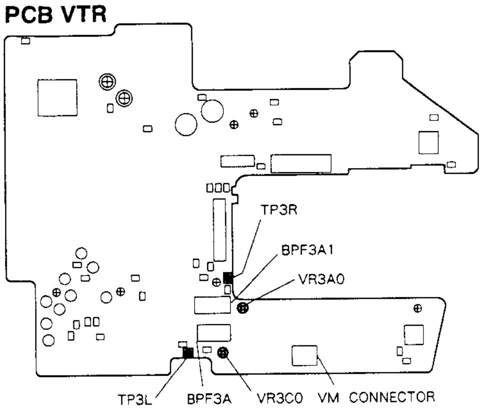
**Adjustment purpose:** Setting FM carrier frequency of Hi-Fi audio signal.

**Symptom when incorrectly adjusted:** Buzz noise.

| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Frequency counter | | Input signal | Stair step |
| Test point | TP3L<br>TP3R | Using tape | A tape (VHS) |
| EXT trigger | — | VCR condition | SP REC (VHS) |
| Measurement range | — | Using jig. | — |

1. Set a VCR to VHS mode.
2. Connect an electrolytic capacitor (16 V min./10 µF) between pin Nos. 1 and 3, and Nos. 2 and 3 of VM connector so that pin No. 3 is negative.
3. Adjust VR3C0 so that frequency of TP3L is 1.400 MHz ± 3.0 kHz.
4. Adjust VR3A0 so that frequency of TP3R is 1.800 MHz ± 3.0 kHz.

**PCB VTR**



## 13. FM Recording Level

**Adjustment purpose:** Hi-Fi audio signal level during recording.

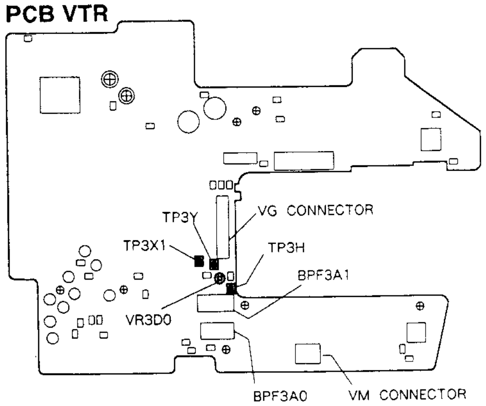
**Symptom when incorrectly adjusted:** Wow and flutter in audio signal or lower S/N in video signal.

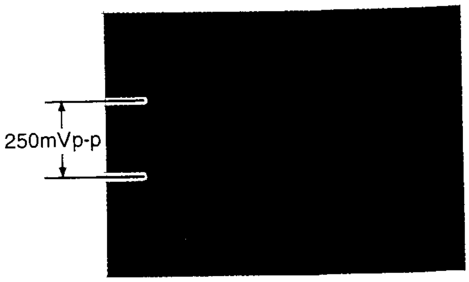
| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| Oscilloscope (Probe 10:1) | | Input signal | Stair step |
| Test point | TP3Y | Using tape | A tape (VHS) |
| EXT trigger | TP3H | VCR condition | LP REC (VHS) |
| Measurement range | DIV : 10 mV<br>TIM : 50 µs | Using jig. | — |

1. Set a VCR to VHS mode.
2. Connect an electrolytic capacitor (16 V min./10 µF) between pin Nos. 1 and 3, and Nos. 2 and 3 of VM connector so that pin No. 3 is negative.
3. Connect ground of probe to TP3X1 through capacitor (0.1 µF).
4. Adjust VR3D0 so that the amplitude of waveform is 250 mVp-p.

**Note:** The earth of trigger must be connected to ground.

**PCB VTR**





**[Character display circuit]**
14. PLL

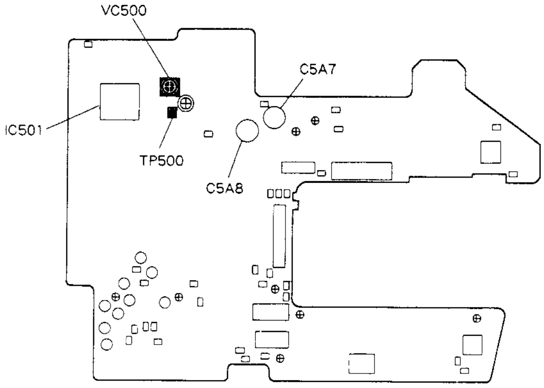
**Adjustment purpose:** Reference clock level of character display circuit.

**Symptom when incorrectly adjusted:** Character will flow in picture.

| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| D.V.M | | Input signal | Video signal (of camera out) |
| Test point | TP500 | Using tape | — |
| EXT trigger | — | VCR condition | Stop |
| Measurement range | — | Using jig. | — |

1. Adjust VC500 so that the voltage is 2.0 ± 0.1 V DC.

**PCB VTR**



15. Character Display Position

**Adjustment purpose:** Location of character display position.

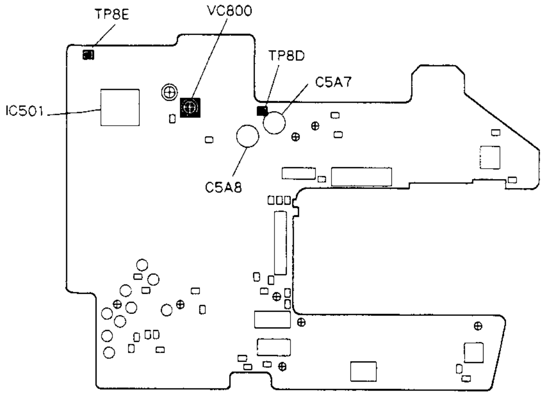
**Symptom when incorrectly adjusted:** Characters will not be displayed in the regular position.

| Measuring instrument and condition | | VCR set up condition | |
|---|---|---|---|
| — | | Input signal | Centre cross signal |
| Test point | — | Using tape | — |
| EXT trigger | — | VCR condition | Stop |
| Measurement range | — | Using jig. | — |

**Caution :** In this adjustment, the view finder must be connected to JE connector.

1. Short TP8D and TP8E to display one vertical line in the picture.
2. Adjust VC800 so that the vertical line lies on the centre line of centre cross signal.

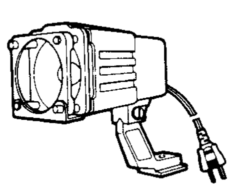
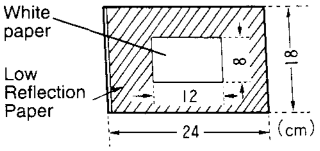
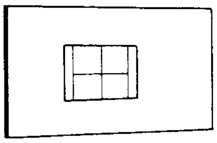
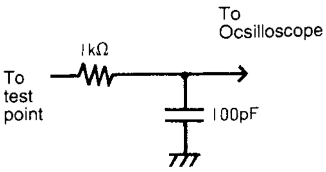
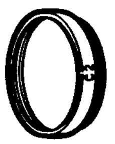
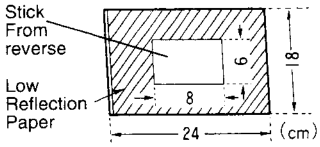
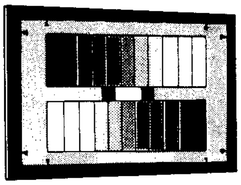
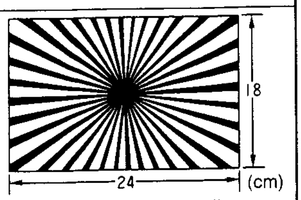
**PCB VTR**



# Adjusting Camera Unit

## 1. Jigs and Measuring Instruments

### 1-1 Jigs

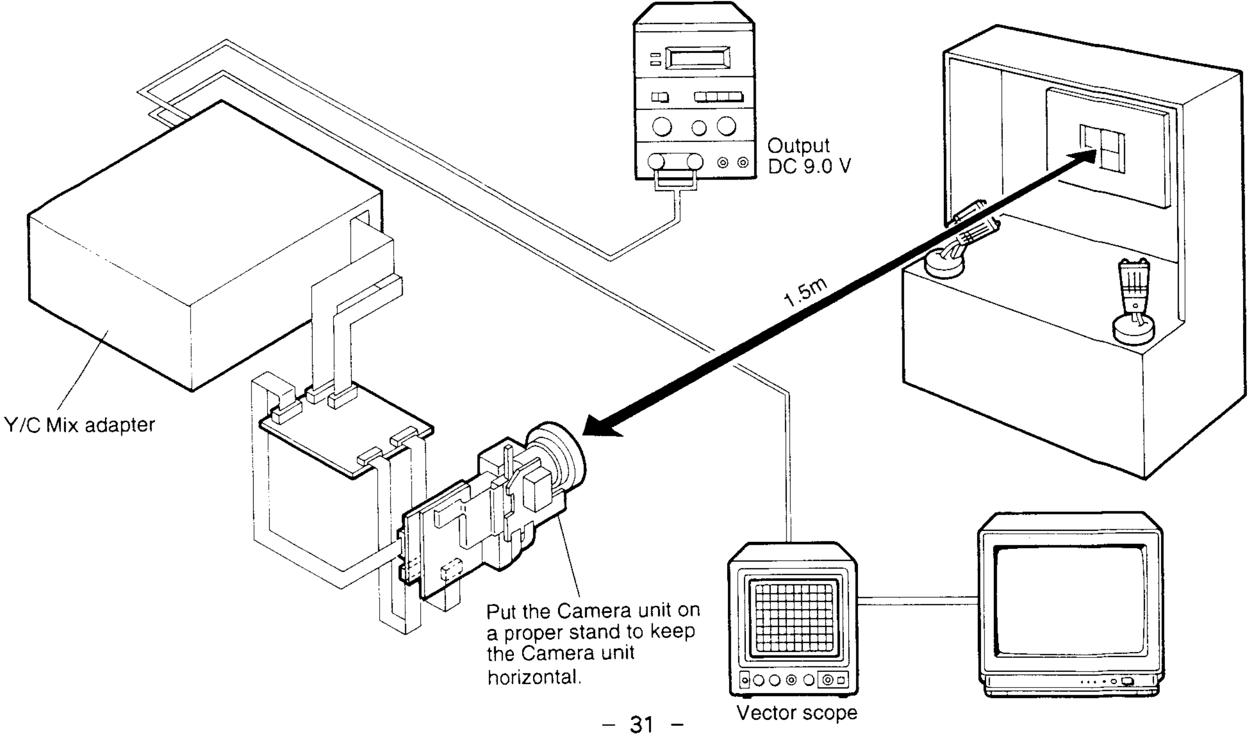
| | | | |
|---|---|---|---|
| Halogen Light<br>VLT-100<br>(3200 ± 50°K) | Window Chart<br>(self-prepared) | Colour Chart (Reflection type)<br>859C39704 | Low Pass Filter<br>(self-prepared) |
|  |  White paper<br>Low Reflection Paper<br>8<br>18<br>12<br>24<br>(cm)<br>Stick black paper on a square corrugated board and white paper, 12(W)x8(H) cm, at the centre on the black paper. |  |  To Ocsilloscope<br>1kΩ<br>To test point<br>100pF |
| Conversion Filter for Colour Temperature and Extinction filter (1/100) | J Chart (self-prepared) | Grey Scale Chart<br>859C361010 | Radial Chart<br>(self-prepared) |
| <br>C2 (859C361080)<br>C12 (859C361070)<br>ND2 (859C362040) |  Stick From reverse<br>Low Reflection Paper<br>6<br>18<br>8<br>24<br>(cm)<br>Make holes at the size of 8(W)x6(H) cm on both a board and black paper and stick white paper from the reverse. |  |  <br>Narrower width between lines better. |

**Note :** Halogen light VLT-100 specified colour temperature at 3200°K available in adjustment.

### 1-2 Measuring Instruments

- Oscilloscope
- Vectorscope
- Illuminometer
- Digital voltmeter
- Colour monitor

## 2. Standard Location and Connection


Output
DC 9.0 V
1.5m
Y/C Mix adapter
Vector scope

Put the Camera unit on a proper stand to keep the Camera unit horizontal.

# 3. Preparation and Check Items

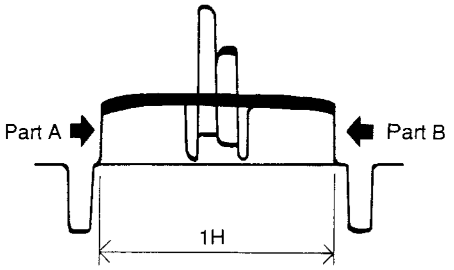
## 3-1 Preparation and Caution

1. You must use lamps with colour temperature at 3200°K to illuminate a chart used in adjustment, and set the lamps so that luminance on the surface of the chart is kept at about 2,000 lx. Install the illuminaires so that the chart is illuminated evenly (two or more light sources are preferable). If luminance on the surface of the chart is uneven, you cannot perform this adjustment properly.
2. When adjusting the Camera unit, you must adjust it without using any extension cable (without separating any unit of the VIDEO CAMERA/RECORDER), except where it's required.
3. Unless otherwise indicated in particular, distance between an object and the Camera unit is 1.5 m.

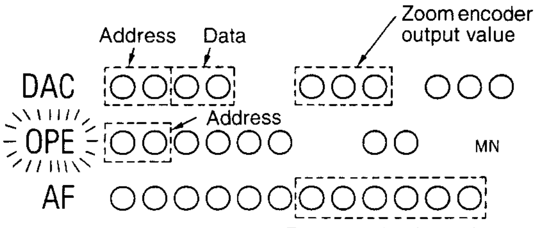
## 3-2 Adjusting Standard Angle of View

When shooting a chart in adjusting the Camera unit, unless otherwise indicated, shoot and adjust at the standard angle of view.

1. Shoot the Colour chart.
2. Connect the probe of oscilloscope to TP3AY or a video output terminal of the Y/C Mix adapter. Observe the waveform as shown right on the screen of oscilloscope.
3. Adjust the Power zoom button so that part A to B in the waveform are same as full effective range of horizontal signal.



## 3-3 Adjusting White Balance with Y/C Mix Adapter



Focus evaluation value

White balance has three modes : "Auto" (OPE address is "00"), "Outdoor" ("01"), "Indoor" ("02"). OPE address is two-digit hexadecimal numbers to right of "OPE" on the screen.

1. Press OPE•DAC button to blink "OPE" display.
2. Press DATA switch to (+) side so that OPE address is 02 (Indoor) and again 00.
3. Press DATA switch to (–) side so that OPE address is 01 (Outdoor) and again 00.

**Note :** When changing mode from Indoor to Outdoor or the reverse, the OPE address must be changed via "00". If OPE address is changed directly, for example, "01" to "02", the mode never be selected properly.

## 3-4 Standard Condition

1. Unless otherwise indicated in particular, set each function mode of the Camera unit in table listed below in adjustment.

| | |
|---|---|
| Shutter | Standard (1/50 s) |
| Focus | Manual |
| Special effects | Off |
| Backlight compensation | Off |
| White balance | Indoor(3,200°K) |

Press reset button of Y/C Mix adapter to set each mode of shutter, special effects, backlight compensation as shown in table above. Setting white balance mode as referred to item 3-3 above.

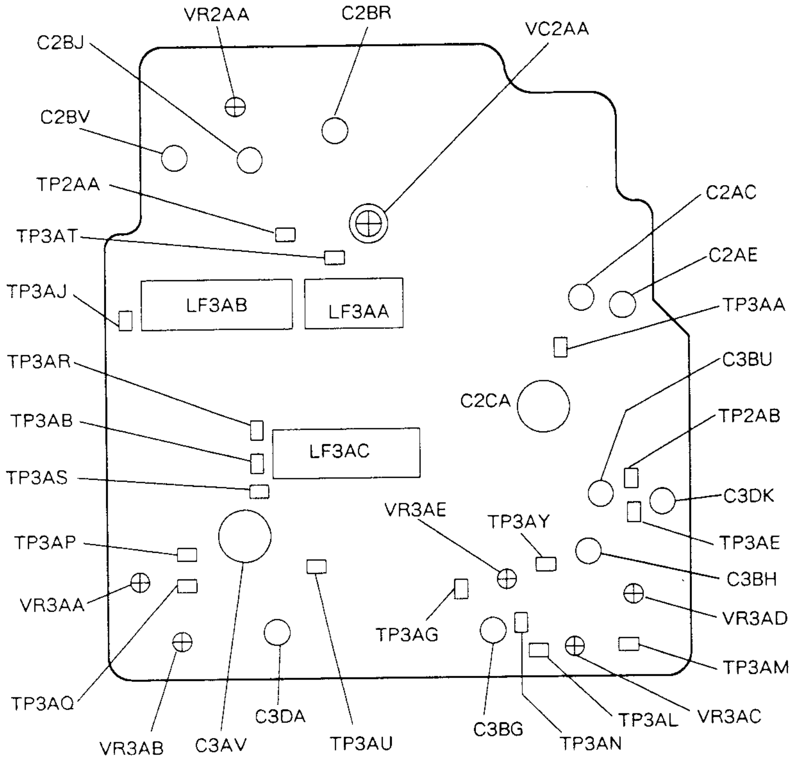
## 4. Adjusting Procedure for Camera Unit

The following shows all procedures to adjust each volume of the Camera unit.
You should perform some adjustment item(s) necessary for a trouble, not all.

1. 25 MHz Frequency
2. Zoom Encoder and Photo Sensor
3. Substrate voltage and Reset Voltage
4. OB Offset
5. ALC
6. CCD Gain
7. Setup Level
8. APL
9. Aperture Correction
10. Chroma Gamma Leak
11. R-Y and B-Y Offsets
12. Chroma Offset and $f_H/2$ Offset
13. White Balance
14. Amplifier Output of Iris Hole Element
15. Fsc
16. Chroma VCO
17. Chroma R-Y and B-Y Offset, and Burst Signal
18. Camera APL
19. Gain of R-Y and B-Y Chroma hue

# Location of Adjustment Points (Camera section)

## PCB SD/PC (COMPONENT SIDE)


VR2AA
C2BR
VC2AA
C2BJ
C2BV
TP2AA
TP3AT
TP3AJ
LF3AB
LF3AA
C2AC
C2AE
TP3AA
TP3AR
C3BU
C2CA
TP3AB
LF3AC
TP2AB
TP3AS
C3DK
VR3AE
TP3AY
TP3AE
TP3AP
C3BH
VR3AA
VR3AD
TP3AG
TP3AM
TP3AQ
C3DA
TP3AL
VR3AC
VR3AB
C3AV
TP3AU
C3BG
TP3AN

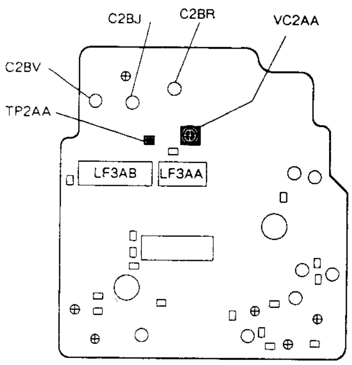
**Note**: Unless otherwise instructed, ground the shield case.

| | |
|---|---|
| 1. 25 MHz Frequency | **Adjustment purpose:** Reference oscillator frequency for timing of CCD drive.<br>**Symptom when incorrectly adjusted:** Disturbance of picture and colour content screen. |

| | |
|---|---|
| Measuring instrument and condition | Frequency counter |
| Test point | TP2AA |
| EXT trigger | — |
| Measurement range | — |
| Chart used | — |

1. Adjust VC2AA so that frequency of TP2AA is 25.750MHz ± 60Hz.

**PCB SD/PC**



| | |
|---|---|
| 2. Zoom Encoder and Photo Sensor | **Adjustment purpose:** Back focus of lens<br>**Symptom when incorrectly adjusted:** Out of focus in zooming |

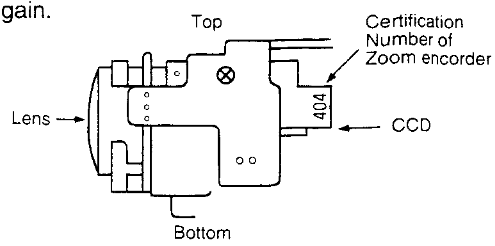
| | |
|---|---|
| Measuring instrument and condition | — |
| Test point | — |
| EXT trigger | — |
| Measurement range | — |
| Chart used | Radial chart<br>(or similar) |

| Certification Number | Movement | Certification Number | Movement |
|---|---|---|---|
| 396 | 203 | 410 | 210 |
| 397 | 203 | 411 | 210 |
| 398 | 204 | 412 | 211 |
| 399 | 204 | 413 | 211 |
| 400 | 205 | 414 | 212 |
| 401 | 205 | 415 | 212 |
| 402 | 206 | 416 | 213 |
| 403 | 206 | | |
| 404 | 207 | | |
| 405 | 207 | | |
| 406 | 208 | | |
| 407 | 208 | | |
| 408 | 209 | | |
| 409 | 209 | | |

1. Locate and shoot the radial chart at a distance of 10 m min. from the Camera unit.
2. Set DAC address to 32.
3. Press a zoom button of Y/C Mix adapter to set zoom encoder output value to 232, where the zoom is at wide angle. (Refer to Page 32 Item 3-3)
4. Set the focus to the best point with view and focus evaluation value, pressing manual button of Y/C Mix adapter. (The best focusing point is obtained where focusing is evaluated at the highest.)
5. Press the zoom button for telephoto. Set the focus to the best point close to telephoto max. with view and focus evaluation value, when read the zoom encoder output value. (This zoom encoder output value is called "V".)
6. Press TELE END button of Y/C Mix adapter to write data in EEPROM.
7. Press the zoom button for wide angle. Set the focus to the best point with view and focus evaluation value, confirm that the zoom encoder output value ranges from V + y + 1 to V + y - 1. (See Certification number table below. The V is the Value at para 5.)
8. Press WIDE END button of Y/C Mix adapter to write data in EEPROM.

**Note :** If not focusing in item 7, bring into focus with the manual button of Y/C Mix adapter. And then press WIDE END button to write data in EEPROM.

9. Press PHOTO SENS. button of Y/C Mix adapter to write data in EEPROM.
10. Turn off the power and then on again.



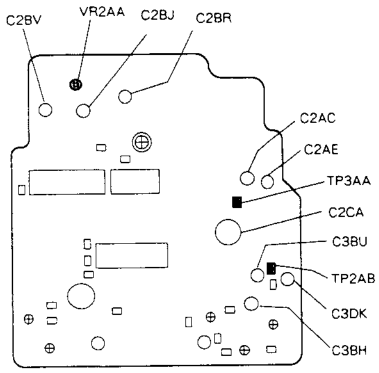
| | |
|---|---|
| 3. Substrate voltage and Reset Voltage | **Adjustment purpose:** Reference voltage for CCD drive.<br>**Symptom when incorrectly adjusted:** S/N ratio lower or blooming |

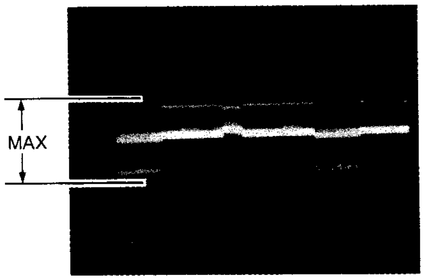
| | |
|---|---|
| Measuring instrument and condition | Oscilloscope (Probe 10:1) |
| Test point | TP3AA |
| EXT trigger | — |
| Measurement range | DIV : 10 mV<br>TIM : 10 µ s |
| Chart used | J chart |

1. Set data of DAC address 17 to FF. Open the iris.
2. Attach a 1/100 extinction filter onto lens of the Camera unit.
3. Shoot the J chart illuminated from the rear with a halogen light at the standard angle of view.
4. Move the location of the halogen light so that level of waveform of TP3AA is at 300 mVp-p.
5. Detach the extinction filter from the lens.
6. Adjust VR2AA so that blooming doesn't appear on the screen.
7. Change the test point from TP3AA to TP2AB.
8. Set DAC address to 09.
9. Decrease data value of DAC address 09 from FF. When waveform shows the maximum and the level changes no longer, stop decreasing the data value.

**Note :** If level of the waveform isn't higher, set the data value to FF.

**PCB SD/PC**



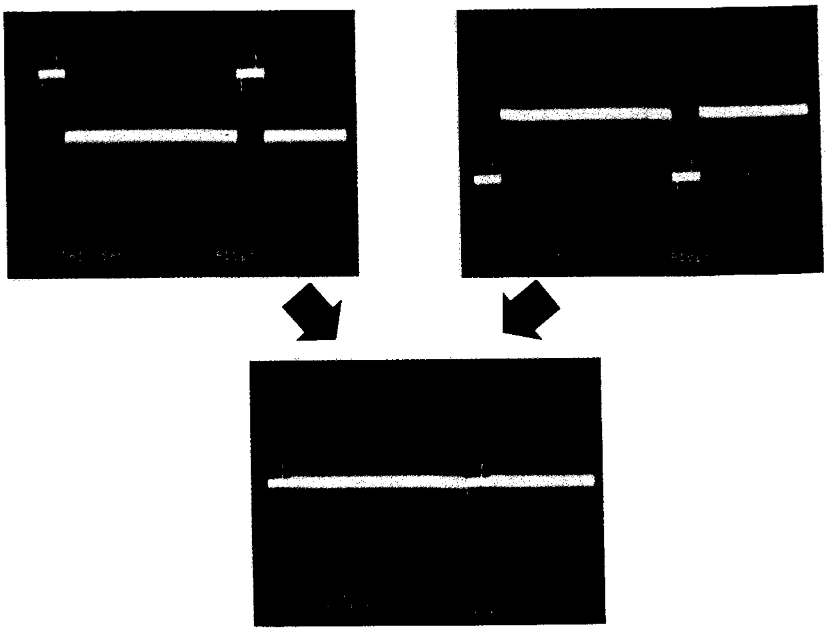


| | |
|---|---|
| 4. OB Offset | **Adjustment purpose:** Black colour level of CCD output signal<br>**Symptom when incorrectly adjusted:** Black of CCD output signal will turn red or blue. |

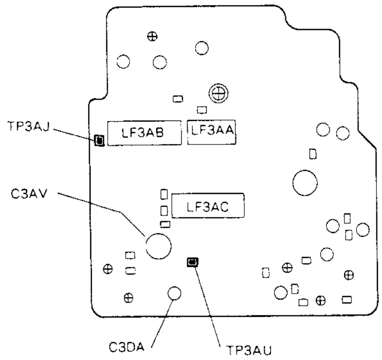
| | |
|---|---|
| Measuring instrument and condition | Oscilloscope (Probe 10:1) |
| Test point | TP3AJ |
| EXT trigger | — |
| Measurement range | DIV : 5 mV<br>TIM : 10 µ s |
| Chart used | Lens shaded |

1. Set DAC address to 0E.
2. Adjust data of DAC address 0E so that offset is at the minimum.

**Note :** If it is hard to observe the waveform because of poor S/N ratio, observe it with a specified low pass filter.



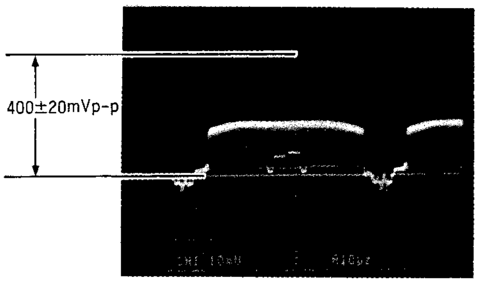
**PCB SD/PC**



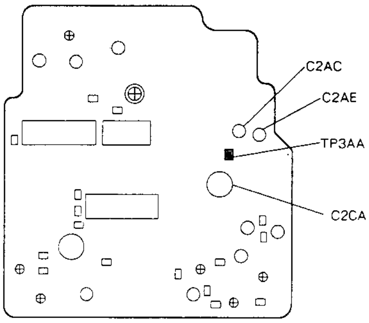
| | |
|---|---|
| 5. ALC | **Adjustment purpose:** Level of iris.<br>**Symptom when incorrectly adjusted:** Poor gradation or whiten by excessive light. |

| | |
|---|---|
| Measuring instrument and condition | Oscilloscope<br>(Probe 10:1) |
| Test point | TP3AA |
| EXT trigger | — |
| Measurement range | DIV : 10 mV<br>TIM : 10 µ s |
| Chart used | Colour chart |

1. Observe TP3AA through the low pass filter.
2. Set DAC address to 17.
3. Adjust data of DAC address 17 so that white peak to pedestal level is at 400 ± 20 mVp-p.



**PCB SD/PC**



| | |
|---|---|
| 6. CCD Gain | **Adjustment purpose:** Gain of delay line of Y/C signal.<br>**Symptom when incorrectly adjusted:** Too sharp or too soft profile in the horizontal on the screen. |

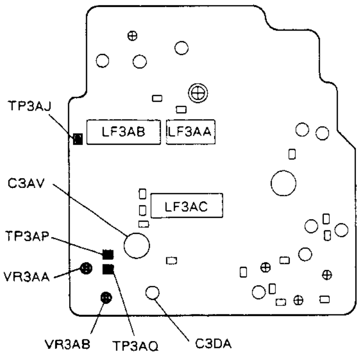
| | |
|---|---|
| Measuring instrument and condition | Oscilloscope<br>(Probe 10:1). |
| Test point | CH-1 : TP3AJ<br>CH-2 : TP3AP |
| EXT trigger | — |
| Measurement range | DIV : 10 mV<br>TIM : 10 µ s |
| Chart used | Window chart |

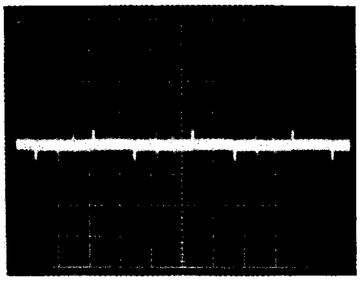
1. Adjust VR3AA so that the difference between TP3AJ and TP3AP with the oscilloscope is the minimum.

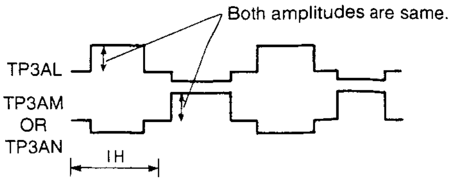
**Note :** Where TP3AP is observed through low pass filter.

2. Change connection of CH-2 of oscilloscope from TP3AP to TP3AQ. Detach the low pass filter of TP3AP.
3. Adjust VR3AB so that the difference between TP3AJ and TP3AQ with the oscilloscope is the minimum.
4. Change connection of CH-1 of oscilloscope from TP3AJ to TP3AL and CH-2 from TP3AQ to TP3AM.
5. Set mode of white balance to “Outdoor” (OPE address : 01).
6. Adjust VR3AC so that the amplitude of signal from TP3AL and TP3AM are same at one point and the 1 H later.
7. Adjust VR3AD so that the amplitude of signal from TP3AL and TP3AN are same at one point and the 1 H later.

**PCB SD/PC**



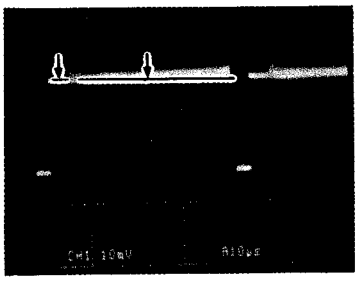




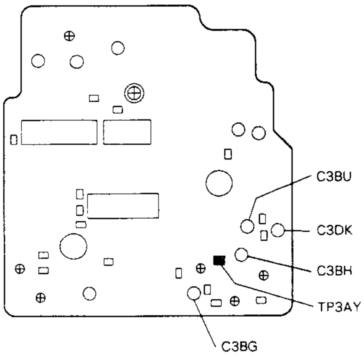
| | |
|---|---|
| 7. Setup Level | **Adjustment purpose:** Black level in video signal.<br>**Symptom when incorrectly adjusted:** Too bright or too dark picture. |

| | |
|---|---|
| Measuring instrument and condition | Oscilloscope (Probe 10:1) |
| Test point | TP3AY |
| EXT trigger | — |
| Measurement range | DIV : 10 mV<br>TIM : 10 µ s |
| Chart used | Lens shaded |

1. Set DAC address to 13.
2. Adjust data of DAC address 13 so that the setup level is at 0 ± 14 mVp-p.



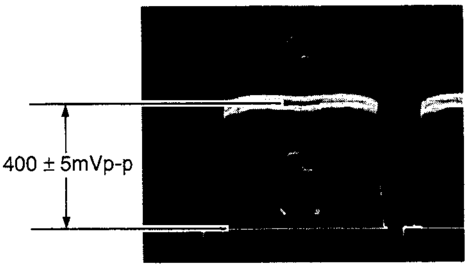
**PCB SD/PC**



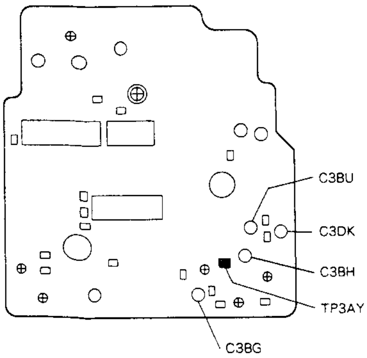
| | |
|---|---|
| 8. APL | **Adjustment purpose:** AGC of video signal processing circuit.<br>**Symptom when incorrectly adjusted:** Too bright or too dark picture. |

| | |
|---|---|
| Measuring instrument and condition | Oscilloscope (Probe 10:1) |
| Test point | TP3AY |
| EXT trigger | — |
| Measurement range | DIV : 10 mV<br>TIM : 10 µ s |
| Chart used | Colour chart |

1. Observe TP3AY through low pass filter.
2. Set DAC address to 0A
3. Adjust data of DAC address 0A so that level of background is at 400 ± 5 mVp-p.



**PCB SD/PC**



| 9. Aperture Correction | **Adjustment purpose:** Correction of profile correcting circuit.<br>**Symptom when incorrectly adjusted:** Too sharp or too soft picture. |
|---|---|

| | |
|---|---|
| Measuring instrument and condition | — |
| Test point | — |
| EXT trigger | — |
| Measurement range | — |
| Chart used | — |

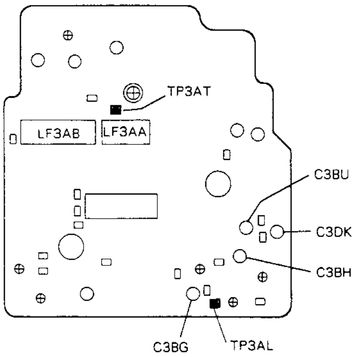
1. Set DAC address to 06.
2. Set data of DAC address 06 to 70.
3. Set DAC address to 07.
4. Set data of DAC address 07 to 88.
5. Set DAC address to 26.
6. Set data of DAC address 26 to 0C.
7. Set DAC address to 27.
8. Set data of DAC address 27 to 0C.

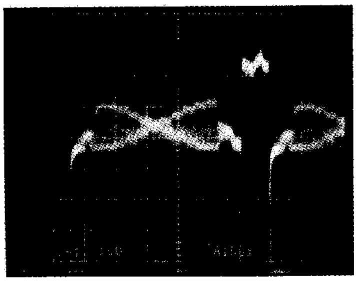
| 10. Chroma Gamma Leak | **Adjustment purpose:** Correcting leak of colour signal occurring with gamma control.<br>**Symptom when incorrectly adjusted:** Colour impurity. |
|---|---|

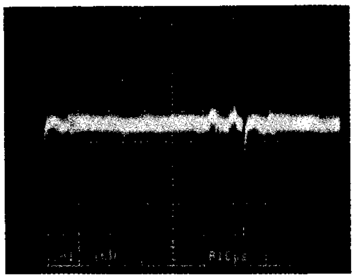
| | |
|---|---|
| Measuring instrument and condition | Oscilloscope<br>(Probe 10:1) |
| Test point | TP3AL |
| EXT trigger | — |
| Measurement range | DIV : 1 mV<br>TIM : 10 μ s |
| Chart used | Gray scale chart |

1. Ground TP3AT at 100 μ F.
2. Set DAC address to 15.
3. Adjust data of DAC address 15 so that gamma leak is the minimum.

**PCB SD/PC**



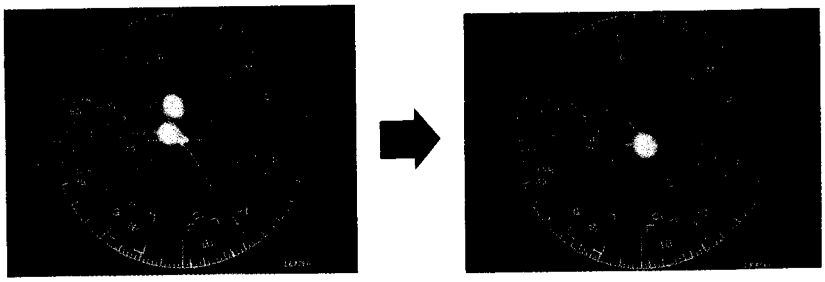




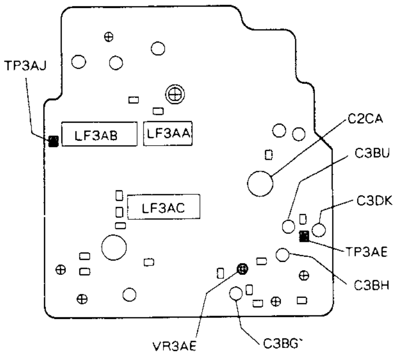
| | |
|---|---|
| 11. R-Y and B-Y Offsets | **Adjustment purpose:** Black level processed in colour-difference signal processing circuit.<br>**Symptom when incorrectly adjusted:** Black in picture will turn red or blue. |

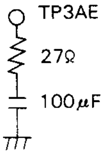
| | |
|---|---|
| Measuring instrument and condition | Vector scope |
| Test point | Y/C Mix adapter<br>Video output terminal |
| EXT trigger | — |
| Measurement range | GAIN : Max.<br>SATURATION : 75 % |
| Chart used | Lens shaded |

1. Set mode of white balance to "Indoor" (OPE address : 02)
2. Ground TP3AE through a series with a resistance (27Ω) and a capacitor (100 µF).
3. Ground TP3AJ through a capacitor (100 µF).
4. Adjust VR3AE so that these two bright spots are overlapped and minimized.
5. Detach the capacitor in TP3AJ.
6. Set a vector scope to NTSC mode.
7. Adjust DAC addresses 0D and 0C so that the bright spot is at the centre of the vector scope.



**PCB SD/PC**

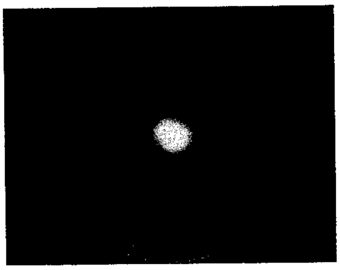




| | |
|---|---|
| 12. Chroma Offset and fH/2 Offset | **Adjustment purpose:** Black level before processing in colour-difference signal circuit.<br>**Symptom when incorrectly adjusted:** Black in picture will turn red or blue. |

| | |
|---|---|
| Measuring instrument and condition | Vector scope |
| Test point | Y/C Mix adapter<br>Video output terminal |
| EXT trigger | — |
| Measurement range | GAIN : Max.<br>SATURATION : 75 % |
| Chart used | Lens shaded |

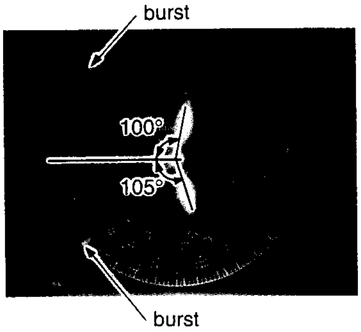
1. Set mode of white balance to "Indoor" (OPE address : 02)
2. Adjust data of DAC addresses 10 and 0F so that bright spot is the closest to the centre of the vector scope.



| | |
|---|---|
| 13. White Balance | **Adjustment purpose:** Reference in displaying "white" on the screen.<br>**Symptom when incorrectly adjusted:** icture will turn red or blue. |

| | |
|---|---|
| Measuring instrument and condition | Vectorscope |
| Test point | Y/C Mix adapter<br>Video output terminal |
| EXT trigger | — |
| Measurement range | GAIN : Variable<br>SATURATION : 75 % |
| Chart used | White chart |

1. Set mode of white balance to "Indoor" (OPE address : 02)
2. Adjust DAC addresses 00 and 01 so that bright spot is at the centre of the vector scope.
3. Set mode of white balance to "Outdoor" (OPE address : 01)
4. Shoot the White chart with a colour filter (C2 + C12).
5. Adjust phase and gain of vectorscope so that burst signal spots at intersection of reference lines of burst and scale circle.
6. Adjust DAC addresses 02 and 03 so that bright spots is at the position in phot. below.



| | |
|---|---|
| 14. Amplifier Output of Iris Hole Element | **Adjustment purpose:** Reading sensor voltage in both sides of iris.<br>**Symptom when incorrectly adjusted:** Poor response of Auto focus. |

| | |
|---|---|
| Measuring instrument and condition | — |
| Test point | — |
| EXT trigger | — |
| Measurement range | — |
| Chart used | — |

1. Set DAC address to 37.
2. Shoot a halogen light at a distance of about one metre from the Camera unit. After one second or more, press TELE END button of the Y/C Mix adapter to write the data in EEPROM.
3. Shade the lens.
4. After shading the lens for one second or more, press WIDE END button of to Y/C Mix adapter to write the data in EEPROM.

*** Adjustments from item 15 on, must be performed with the camera connected to the VCR.**

| | |
|---|---|
| 15. Fsc | **Adjustment purpose:** Frequency of reference frequency oscillator in colour signal processing circuit.<br>**Symptom when incorrectly adjusted:** Poor colour display in picture. |

| | |
|---|---|
| Measuring instrument and condition | Frequency counter |
| Test point | TP6J |
| EXT trigger | — |
| Measurement range | — |
| Chart used | — |

1. Play back alignment tape (colour bar).
2. Adjust VC6A1 so that the frequency is at 4.433635MHz ± 30Hz.

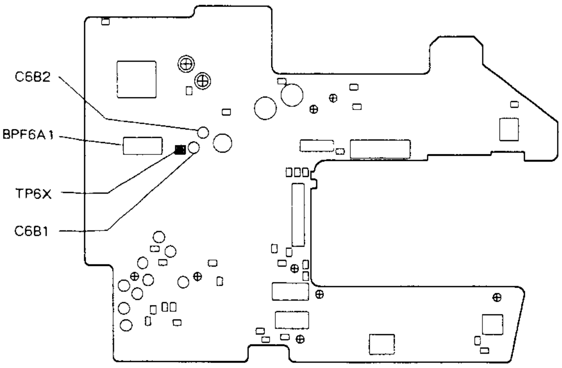
**Note :** Do adjustment after the power supply turning on within one minute.

| | |
|---|---|
| 16. Chroma VCO | **Adjustment purpose:** Frequency of reference oscillator in low frequency colour signal processing circuit.<br>**Symptom when incorrectly adjusted:** Poor colour display in picture. |

| | |
|---|---|
| Measuring instrument and condition | Frequency counter |
| Test point | TP6X |
| EXT trigger | — |
| Measurement range | — |
| Chart used | Lens shaded |

1. Set DAC address to 1A and the data to 00.
2. Set DAC address to 19.
3. Adjust data of DAC address 19 so that the frequency is at 613 ± 3 kHz.
4. Set data of DAC address 1A to FF.

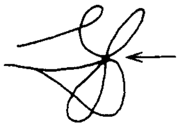
**PCB VTR**



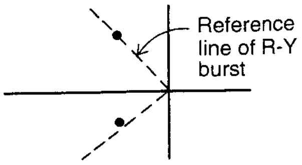
|  |  |
|---|---|
| 17. Chroma R-Y and B-Y Off set, and Burst Signal | **Adjustment purpose:** Setting white level in picture to the best and chroma level in video output signal to the regular.<br>**Symptom when incorrectly adjusted:** White in picture will turn blue or red. Or, colour signal will not displayed regularly. |

|  |  |
|---|---|
| Measuring instrument and condition | Vector scope |
| Test point | Video output terminal |
| EXT trigger | — |
| Measurement range | GAIN : Max.<br>SATURATION : 75 % |
| Chart used | Colour chart |

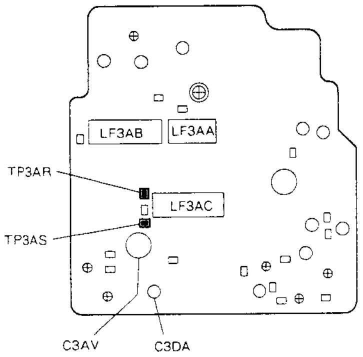
1. Adjust DAC addresses 11 and 12 so that bright spot is the closest to the centre point of the vector scope.


Set the brightest spot in this point to the centre of the vector scope.

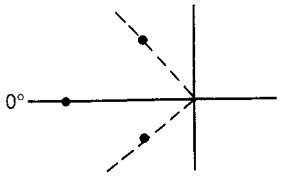
2. Set mode of vector scope to PAL. Rotate the gain to locate reference line of R-Y burst signal at the regular position on the vector scope.



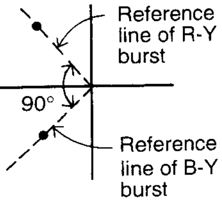
**PCB SD/PC**



3. Ground TP3AR through a capacitor (100 μF).
4. Set DAC address to 16.
5. Adjust data of DAC address 16 so that bright spot is on the line 0°.

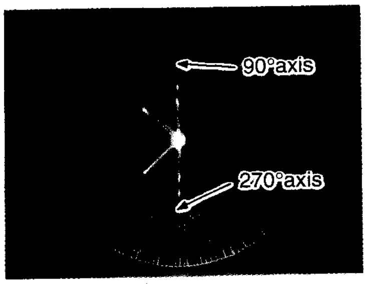


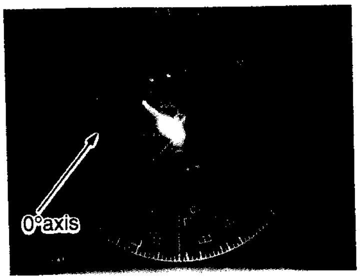
6. Set DAC address to 1B.
7. Adjust data of DAC address 1B so that the angle between spots of R-Y and B-Y burst signals is 90°.
8. Detach the capacitor in TP3AR.



9. Ground TP3AS through a capacitor (100 μF).
10. Set DAC address to 18.
11. Adjust data of DAC address 18 so that the longest of luminescent lines around 90° -axis is lied on the axis.
12. Set DAC address to 1B.
13. Adjust data of DAC address 1B so that the longest of luminescent lines around 270° -axis is lied on the axis.
14. Detach the capacitor in TP3AS.
15. Repeat items 2 to 7.
16. Set mode of vectorscope to NTSC.
17. Set DAC address to 16.
18. Adjust data of DAC address 16 so that two bright spots of red are overlapped each other.
19. Set DAC address to 14.
20. Adjust data of DAC address 14 so that bright spot of burst signal is at 75%.

* When there is no NTSC vector scope in the step 16~18, adjust it by the following method. Adjust data of DAC address 16 so that two bright spots of red are line symmetry to 0° -axis.

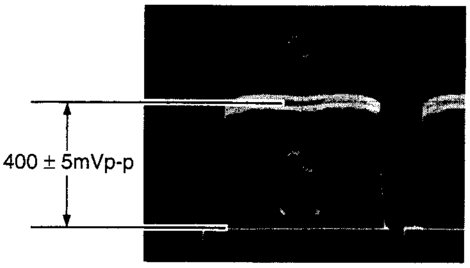




| | |
|---|---|
| 18. Camera APL | **Adjustment purpose:** Regular level of video signal.<br>**Symptom when incorrectly adjusted:** Too bright or too dark picture. |

| | |
|---|---|
| Measuring instrument and condition | Oscilloscope (Probe 10:1) |
| Test point | Video output terminal (75 Ω terminated) |
| EXT trigger | — |
| Measurement range | DIV : 10 mV<br>TIM : 10 μ s |
| Chart used | Colour chart |

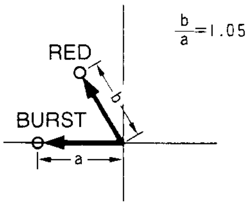
1. Set DAC address to 0A.
2. Adjust data of DAC address 0A so that background level is at 400 ± 5 mVp-p.

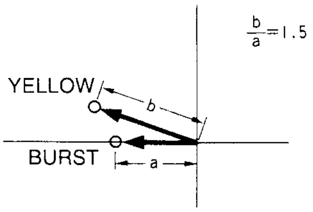


| | |
|---|---|
| 19. Gain of R-Y and B-Y, and Chroma hue | **Adjustment purpose:** Gain of colour-difference signal and chroma hue of composite signal.<br>**Symptom when incorrectly adjusted:** Colour signal will not be displayed on the screen regularly. |

| | |
|---|---|
| Measuring instrument and condition | Vectorscope |
| Test point | Video output terminal |
| EXT trigger | — |
| Measurement range | GAIN : regular<br>SATURATION : 75 % |
| Chart used | Colour chart |

1. Set mode of white balance to "Indoor" (OPE address : 02).
2. Set DAC address to 04.
3. Adjust data of DAC address 04 so that the distance from the centre of vectorscope to bright spot of red is 1.05 times that of burst.
4. Set DAC address to 05.
5. Adjust data of DAC address 05 so that the distance from the centre of vectorscope to the bright spot of yellow is 1.5 times that of burst.





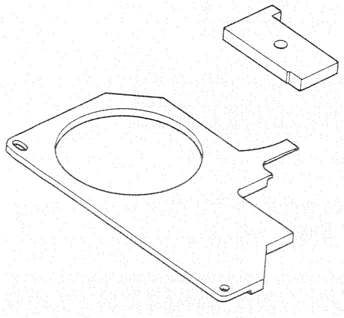
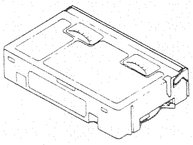
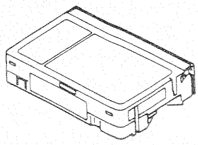
6. Set DAC address to 0B.
7. Adjust data of DAC address 0B so that phase of the spot of red is at 106 ± 2°.
8. Repeat the adjusting procedures above so that all values are set at the specified.

**Note :** Confirm that the phase of the spot of yellow is at 154 ± 8°.
If it is not, adjust data of DAC address 08.

# MECHANICAL ADJUSTMENT

## 1. Jigs and Measuring Instruments Required for Mechanism Adjustment

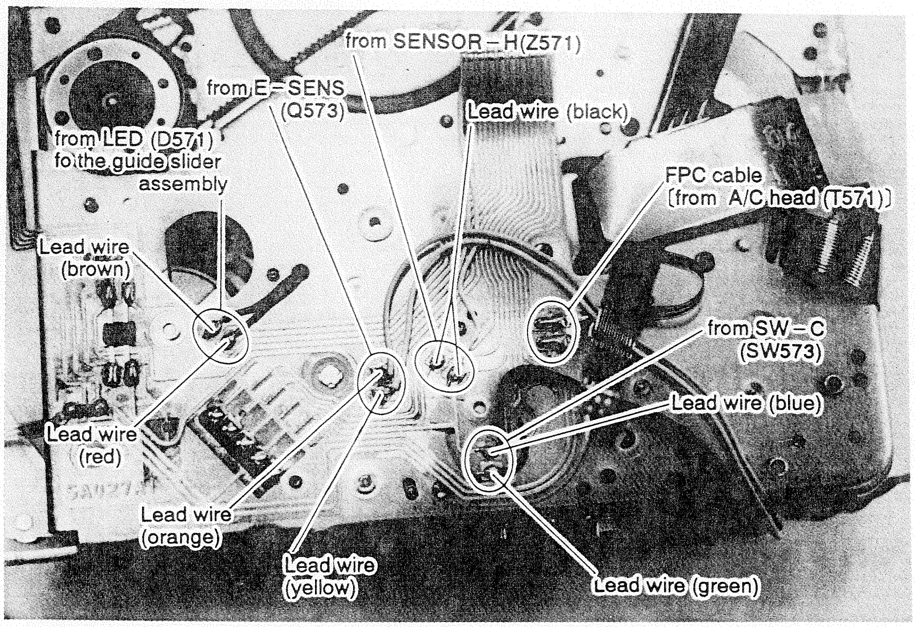
### 1-1. Jigs for Adjustment

| Master plane | Cassette torque meter | Alignment tape |
|---|---|---|
| 859C398050 | 859C360010 | PM6KE2C [859C397060]<br>PM3KE6 (CH1)C35 [859C399070]<br>PMX- C [859C399050] |
|  |  |  |

### 1-2. Other Tools and Measuring Instruments Required

① Colour monitor (Colour TV)
② Oscilloscope
③ Hex key (1.5mm, 0.7mm)
④ Box driver (3.0mm)

### 1-3. Soldering points of lead wire


from SENSOR−H(Z571)
from E−SENS (Q573)
Lead wire (black)
from LED (D571) fo the guide slider assembly
FPC cable [from A/C head (T571)]
Lead wire (brown)
from SW−C (SW573)
Lead wire (blue)
Lead wire (red)
Lead wire (orange)
Lead wire (yellow)
Lead wire (green)

## 2. CLEANING

The following parts should be routinely cleaned as part of service or to maintain top performance.

### 2-1 Cleaning the video heads

① Deposits of dust and similar foreign material on the head cause the head to fail to reproduce clear image. Hold a video head cleaning cloth dampened with cleaning solution, lightly against the drum. Holding the cloth, gradually rotate the drum counterclockwise.

**Note:**

Do not touch the head tips in to the upper drum. The head tip is very hard but not resistant against impact (particularly against force in vertical direction). Never move the head tip in vertical direction.

② Do not run a tape before the drum is fully dry. Residual solution may damage the tape.

### 2-2 Cleaning the tape path system

The parts along the tape path,which need cleaning are listed below:

1. Regulator tension pole
2. Supply slant pole
3. Supply impedance pole
4. Supply tape guide pole
5. Supply guide roller
6. Drum assembly
7. Takeup guide roller
8. Takeup tape guide pole
9. Takeup slant pole
10. Takeup guide arm roller
11. A/C head
12. GR-lever roller
13. Capstan motor shaft
14. Pinch roller

**Note:**

Use a dry cleaning cloth to clean the supply guide roller and takeup guide roller. Do not use cleaning solution.

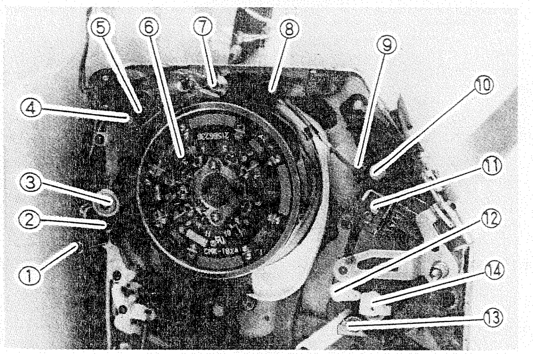


Fig. 1-1-1

### 2-3 Cleaning the reel disk driving system

① Clean the surface of the brake of the reel disk.

② Clean the reel disk drive member with a cleaning cloth damped with cleaning solution.

③ Do not operate the mechanism before cleaned parts are dry.

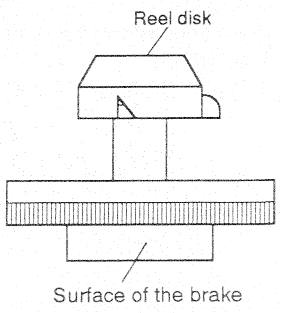


Fig. 1-1-2

## 3. HOW TO ATTACH THE MASTER PLANE

① Remove the cassette housing (see para. 4-1, HOW TO REPLACE THE PRINCIPAL PARTS)

② Feed the loading motor with approx. 3.5 VDC and put the deck to loading condition.

③ Place the master plane on the main plate so that the positioning pin enters the positioning hole and the plane is off the drum.

**Note:**

When using the master plane, firmly hold it by pressing at the point A as shown in Fig. 2-1.

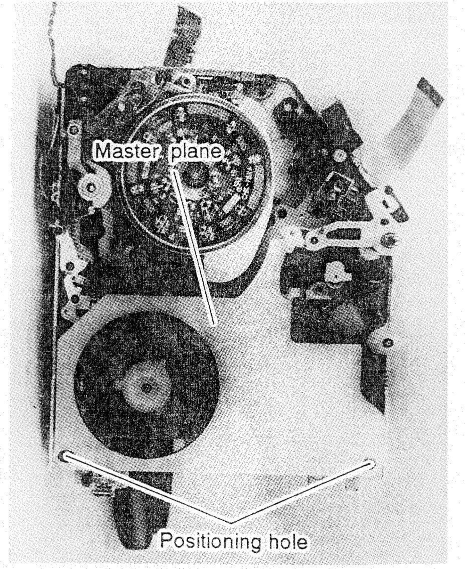


Fig . 2-1

# 4. HOW TO REPLACE THE PRINCIPAL PARTS

## 4-1 Cassette housing replacement

### Removal

① Set the cassette housing to eject mode.
② Remove two screws ( ⓐ, ⓑ ) holding the leaf switch.
③ Remove two screws (ⓒ,ⓓ )holding the cassette housing.
④ Slide the cassette housing toward you. Push the link on supply side and takeup side (Fig.3-1-3 and 3-1-4) slightly to make clearance for the roller ; and remove the rollers from the grooves in the main plate. Remove the cassette housing.

### Installation

① Set the cassette housing to eject mode.
② Push the link on supply side and takeup side (Figs. 3-1-3 and 3-1-4) slightly to make clearance for the roller; and insert the rollers into the grooves. Make sure that the sync shaft is under the fixing part of the leaf switch (see Fig. 3-1-6).
③ Referring to Fig. 3-1-5, engage the projection of the sync holder of cassette housing with the cutaway groove in the main plate.
④ Secure the cassette housing with screws ⓒ and ⓑ.
⑤ Secure the leaf switch with screws ⓐ and ⓑ.

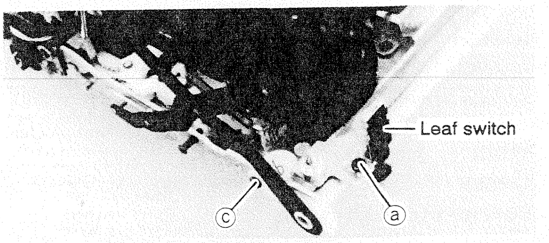

Leaf switch
ⓒ
ⓐ

Fig. 3-1-1

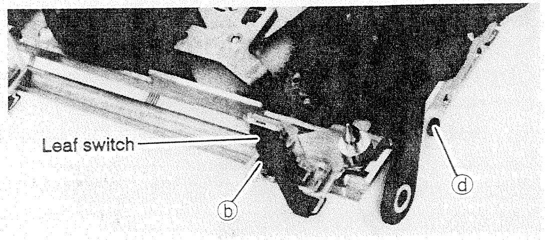

Leaf switch
ⓑ
ⓓ

Fig. 3-1-2

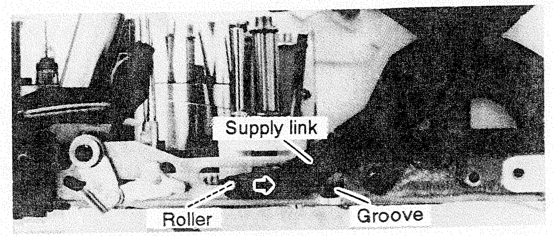

Supply link
Roller
Groove

Fig. 3-1-3

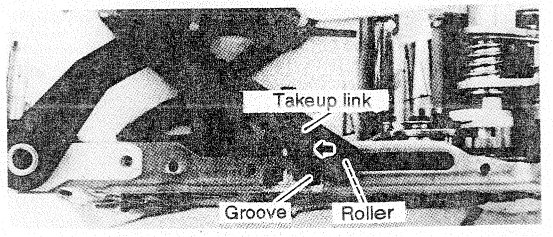

Takeup link
Groove
Roller

Fig. 3-1-4

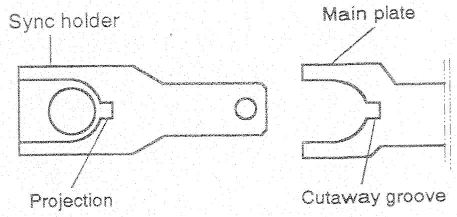

Sync holder
Main plate
Projection
Cutaway groove

Fig. 3-1-5

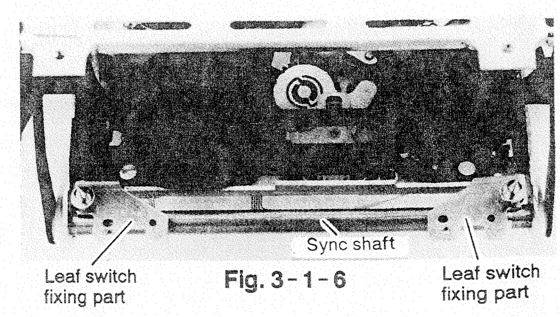

Sync shaft
Leaf switch fixing part
Leaf switch fixing part

Fig. 3-1-6

## 4-2 Damper unit replacement

### Removal

① Remove screws ⓐ and ⓑ. Remove the damper unit (damper section) by moving it in the direction of arrow.

**Note:**

Gears in the damper unit may fall away. Be careful not lose them.

② Remove the cassette housing (see para. 4-1).

③ Remove cut washers ⓒ and ⓓ. Remove the link of supply side and takeup side from the bottom housing shaft.

④ Slide the supply arm to the rear end. While pushing the supply arm toward side, take out the bottom housing and damper unit (lever section) off respective groove.

⑤ Remove the cut washer ⓔ and then remove the damper unit (lever section).

### Installation

① Attach the cut washer ⓔ and secure the damper unit (lever section).

② Put the roller of supply arm into the groove in the damper unit (lever section) and in the bottom housing.

③ Slide the link of the supply side and takeup side onto respective pins of the bottom housing, attach cut washers ⓒ and ⓓ and secure supply side link and takeup side link.

④ Lower the damper unit (lever section) ⓐ and ⓑ secure it with screws ⓐ and ⓑ.

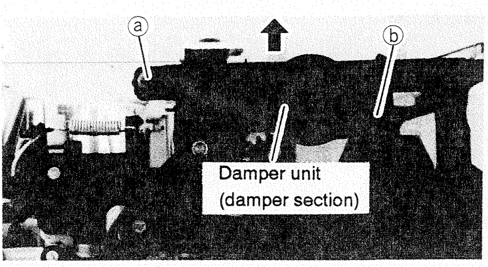

ⓐ
ⓑ
Damper unit
(damper section)

Fig. 3-2-1

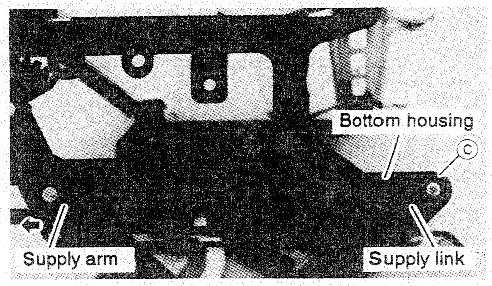

Bottom housing
ⓒ
Supply arm
Supply link

Fig. 3-2-2

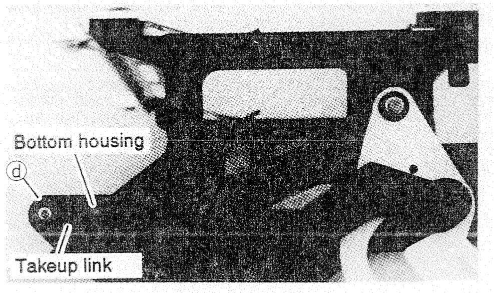

Bottom housing
ⓓ
Takeup link

Fig. 3-2-3

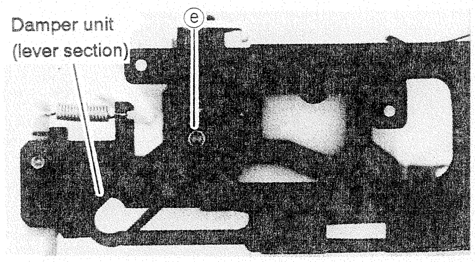

Damper unit
(lever section)
ⓔ

Fig. 3-2-4

## 4-3 Drum assembly replacement

### Removal

① While supporting the drum assembly, remove screws ⓐ, ⓑ and ⓒ that hold the assembly.
② Gradually lift up the drum assembly, take care to clear adjacent components.

### Installation

① Insert two FPC cables from the drum assembly into the respective grooves in the main plate.
② Place the drum assembly on the main plate while taking care not to touch adjacent components. Align the positioning pin of the assembly with the positioning hole in the main plate.
③ Secure the drum assembly with screws ⓐ, ⓑ and ⓒ.

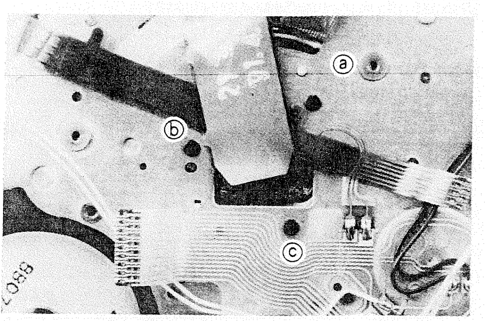


Fig. 3-3-1

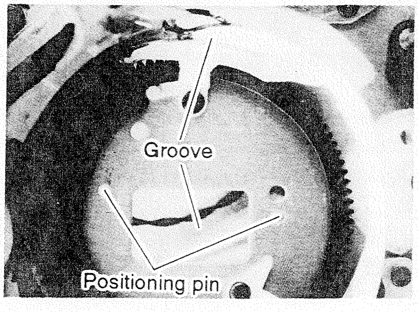


Fig. 3-3-2

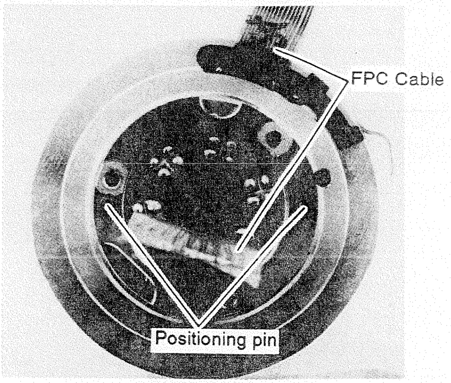


Fig. 3-3-3

## 4-4 Loading motor replacement

### Removal

① Remove screws ⓐ and ⓑ and then remove the loading motor.

### Installation

① Verify that the motor holder is placed on the loading motor mounting area of the main plate.
② Engage the loading motor gear and idler gear S. Secure the motor with screws ⓐ and ⓑ.

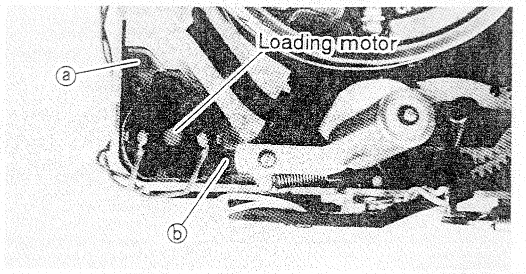


Fig. 3-4-1

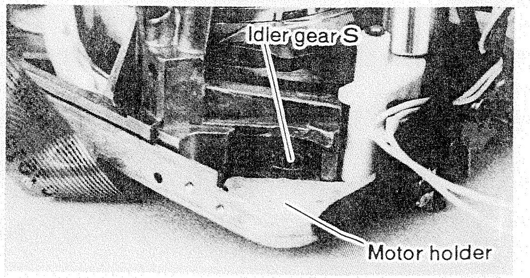


Fig. 3-4-2

## 4-5 Reel disk replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove cut washer ⓐ. Remove the reel disk from the shaft of the main plate.

### Installation

① Make sure that two thrust washers are on the reel disk mounting shaft on the main plate.
② Gradually place the reel disk to the shaft of the main plate. Make sure that the tension belt is attached along the brake surface of the supply reel disk.
③ Attach the cut washer ⓐ and secure the reel disk.
④ Make sure that the reel disk turns smoothly.
⑤ Attach the master plane (see para. 3).
⑥ Place a height adjusting square on the master plane.
⑦ Slide the height measuring face of the square to the edge of the reel disk, and make sure that the reel disk turns smoothly at the face A of the square (upper face of measuring part) and will not turn at face B (lower surface of measuring Block).
⑧ If the result of step (7) is not acceptable, add or remove thrust washer(s) (material code: 552C006010) under the reel disk.
⑨ Mount the cassette housing.

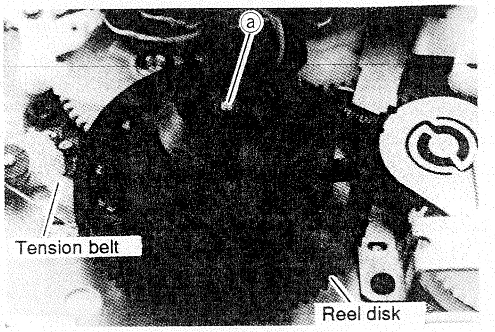


Fig. 3-5-1

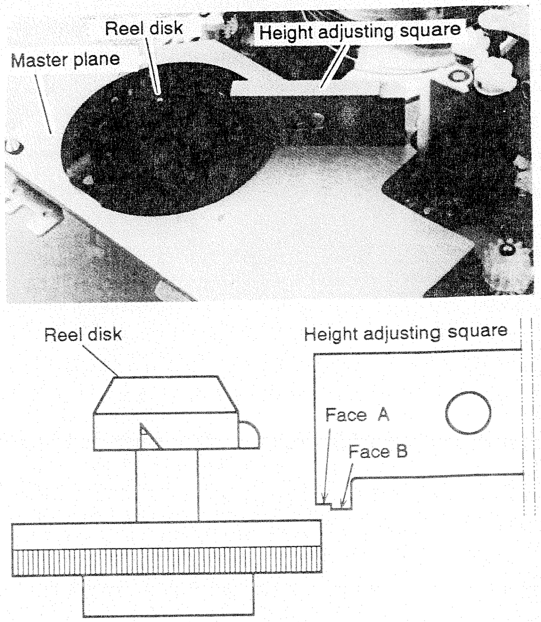


Fig. 3-5-2

## 4-6 Reel gear replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove the cut washer ⓐ and then remove the gear TU1 from the main plate shaft.
③ Remove the cut washer ⓑ holding the reel gear.
④ Slightly move the clutch plate OFF in the direction of arrow and remove the reel gear from the main plate shaft.

### Installation

① Make sure that the thrust washers are on the reel gear mounting shaft.
② Slightly move the clutch plate OFF in the direction of arrow and place the reel gear to the main plate shat.
③ Secure the reel with the cut washer ⓑ.
④ Make sure that the thrust washer is attached on the gear TU1 mounting shaft.
⑤ Place the gear TU1 to the mounting shaft on the main plate and secure the gear with the cut washer ⓐ.
⑥ Mount the cassette housing.

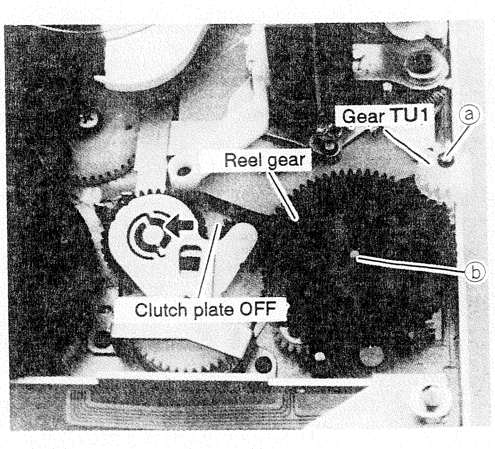


Fig. 3-6-1

## 4-7 Sync belt replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove screws ⓐ and ⓑ that holding the idler unit.
③ Remove the sync belt from the capstan motor and idler unit.

### Installation

① Attach the sync belt to the capstan motor and idler unit.
② Secure the idler unit with screws ⓐ and ⓑ.
③ Mount the cassette housing.

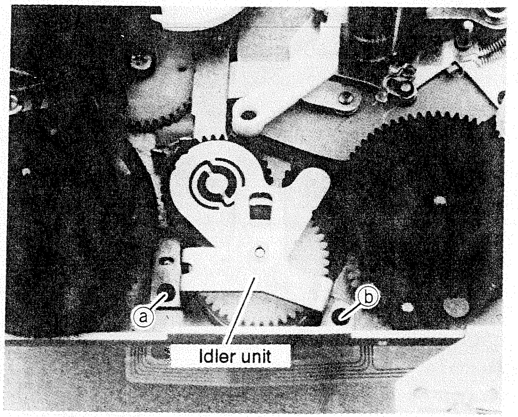


Fig. 3-7-1

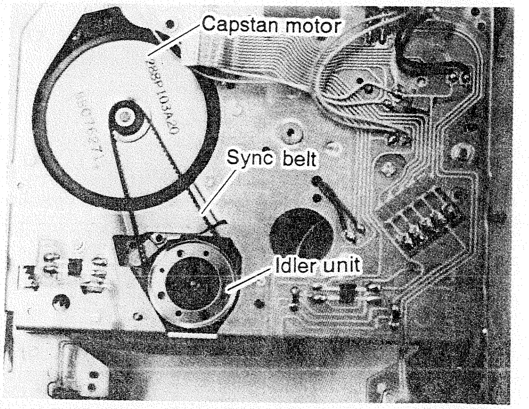


Fig. 3-7-2

## 4-8 Clutch unit replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove all the parts described in para. 4-6 (Reel gear replacement).
③ Remove spring RS.
④ Remove the cut washer ⓐ and then remove the clutch unit from the main plate shaft and clutch plate OFF shaft.

### Installation

① Attach the clutch unit to the main plate shaft and clutch plate OFF shaft.
② Secure the clutch unit with the cut washer ⓐ.
③ Attach the spring RS.
④ Mount all the parts described in para. 4-6 (Reel gear replacement).
⑤ Mount the cassette housing.

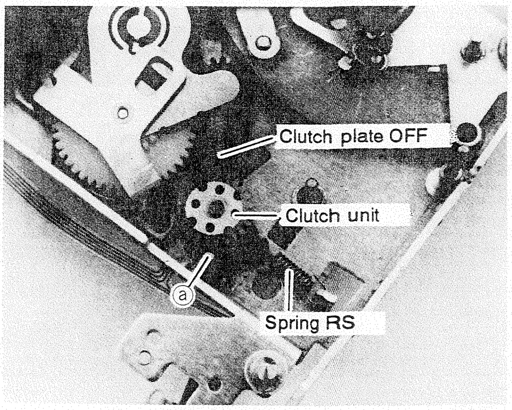


Fig. 3-8-1

## 4-9 A/C head replacement

### Removal

① Remove the cassette housing (see para. 4-1).

② FPC cable connected to the A/C head is taped on the reverse side of the main plate with pressure sensitive adhesive double coated tape (see Fig. 3-9-1). Melt soldering of the FPC cable soldered on the FPC sensor assembly. Detach it from the tape carefully and take it off the slant T.

③ Remove nut S.

④ Pull the A/C head assembly gradually off the shaft on the capstan motor stator.

**Note:**
Removing the A/C head also loosens the A/C washer and spring G on the shaft. Take care not to lose them.

⑤ Pull the GR-lever roller and A/C arm spring off the A/C plate as shown in Fig. 3-9-3.

⑥ Remove screws ⓐ, ⓑ and ⓒ. Remove the A/C head and A/C plate spring from the A/C plate.

⑦ Desolder the lead wires at the A/C head.

### Installation

① Solder the lead wires to the A/C head.

② Mount the A/C plate spring and A/C head on the A/C plate. Secure these parts with screws ⓐ, ⓑ and ⓒ to the dimension shown in Fig. 3-9-4.

③ Place the A/C arm spring and GR-lever to the A/C plate shaft. For mounting status of the A/C arm spring, see Fig. 3-9-2.

④ Attach the A/C head assembly to the shaft of the capstan motor stator. To do so, move the GR - lever roller in the direction of arrow in Fig.3-9-2. Orient the assembly so that the GR-lever tipR Ⓐ is inside the main plate and the A/C head phase adjuster screw Ⓑ of the A/C plate is outside the main plate.

⑤ Tighten the nut S (temporary).

⑥ Install the master plane (see para. 3).

⑦ Place the height adjusting square on the master plane.

⑧ Adjust nut S so that the centre of the distance between measuring faces Ⓐ and Ⓑ of the square is at the same level as the edge of the lowerflange of GR-lever roller. This is a critical adjustment since the distance between the Ⓐ and Ⓑ faces is small.

**Note:**
Check the adjustment by turning the GR-lever roller. It should rotate smoothly without touching the arm pinch.

⑨ Put the FPC cable connected to the A/C head through slant T. Tape it on the reverse of the Main plate with pressure sensitive adhesive double coated tape (see Fig. 3-9-1). Solder it on the FPC sensor assembly.

⑩ Mount the cassette housing.

⑪ Following the description in para. 5-5, A/C head adjustment.

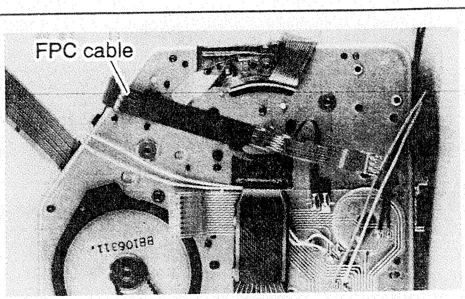


Fig. 3-9-1

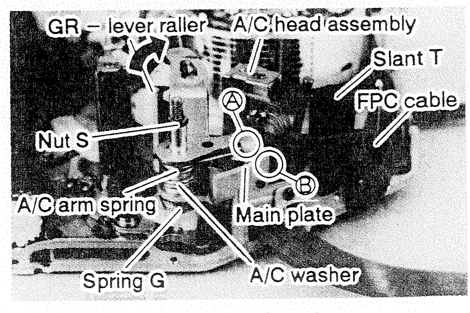

GR - lever raller
A/C head assembly
Slant T
FPC cable
Ⓐ
Nut S
Ⓒ
Ⓑ
A/C arm spring
Main plate
Spring G
A/C washer

Fig. 3-9-2

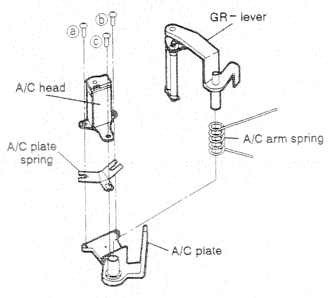

ⓐ
ⓑ
ⓒ
GR- lever
A/C head
A/C plate spring
A/C arm spring
A/C plate

Fig. 3-9-3

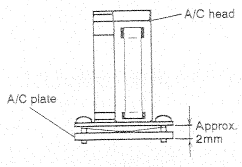

A/C head
A/C plate
Approx. 2mm

Fig. 3-9-4

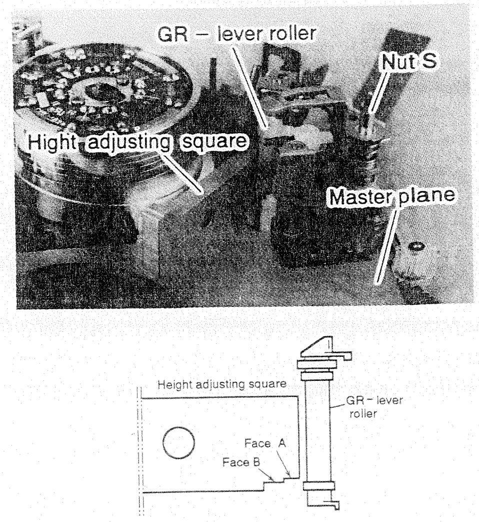

GR - lever roller
Nut S
Hight adjusting square
Master plane
Height adjusting square
GR- lever roller
Face A
Face B

Fig. 3-9-5

## 4-10 Pinch roller assembly and Pinch roller replacement

### 4-10-1 Pinch roller assembly replacement

**Removal**

① Remove the cassette housing (see para. 4-1).
② Remove the A/C head assembly (see para. 4-9).
③ Pull out A/C washer and spring G off the A/C head mounting shaft.
④ Remove the cam gear TUG from the A/C head assembly mounting shaft.
⑤ Remove the pinch roller arm spring.
⑥ Remove screw ⓐ and then pinch roller washer.
⑦ Remove the pinch roller assembly from the shaft on the capstan motor stator.

**Installation**

① Mount the pinch roller assembly on the shaft on the capstan motor stator. Be sure to position the pin at lower part of the pinch roller assembly to the part of the takeup guide arm shown in Fig.3-10-2.
② Attach the pinch roller washer to the pinch roller assembly. Secure the pinch roller with the screw ⓐ.
③ The cam gear TUG has two positioning pins at the lower part. Attach the cam gear TUG to the takeup guide arm by first aligning the positioning pins with the positioning holes (Fig. 3-10-2) in the takeup guide.
④ Attach the spring G and A/C washer to the A/C head assembly mounting shaft.
⑤ Mount the A/C head assembly.
⑥ Mount the cassette housing.

### 4-10-2 Pinch roller replacement

**Removal**

① Remove the cassette housing (see para. 4-1).
② Set the deck to loaded status. Release the load just before the pinch roller touches the capstan motor shaft (see Fig. 3-10-3).
③ Move the GR-lever roller in the arrow - shown in Fig. 3-10-3, and then gradually remove the pinch roller cap.
④ Slide the pinch roller off the pinch roller arm shaft.

**Installation**

① Move the GR-lever roller in the direction of arrow.
② Make sure that the cam L-GR is attached on the pinch roller arm. Attach the pinch roller to the pinch roller arm shaft with orientation as shown in Fig. 3-10-4.
③ Attach the pinch roller cap to the pinch roller arm shaft with the orientation as shown in Fig. 3-10-4.

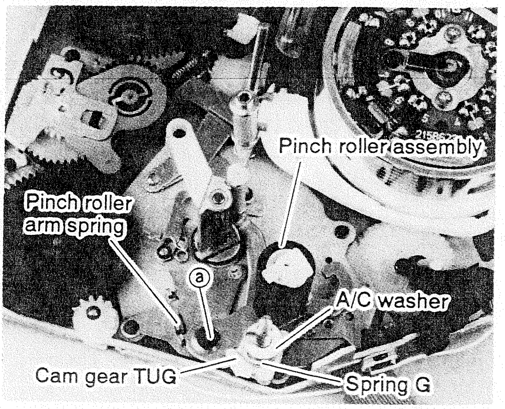

Pinch roller assembly
Pinch roller arm spring
ⓐ
A/C washer
Cam gear TUG
Spring G

Fig. 3-10-1

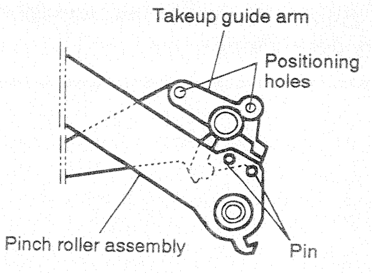

Takeup guide arm
Positioning holes
Pinch roller assembly
Pin

Fig. 3-10-2

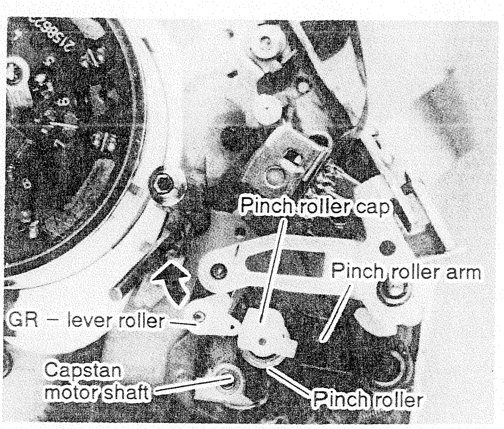

Pinch roller cap
Pinch roller arm
GR – lever roller
Capstan motor shaft
Pinch roller

Fig. 3-10-3

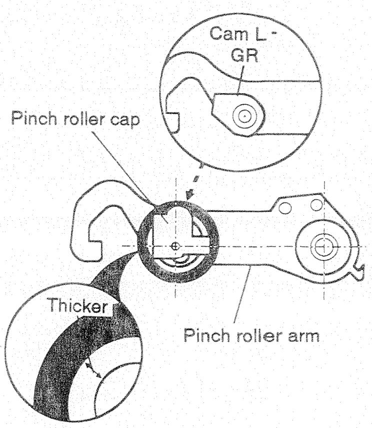

Cam L-GR
Pinch roller cap
Thicker
Pinch roller arm

Fig. 3-10-4

## 4-11 Slant T replacement

### Removal

① FPC cable connected to the A/C head is taped on the reverse of the main plate with pressure sensitive adhesive double coated tape (see Fig. 3-11-1). Detach it from the tape carefully and take it off the slant T.

② Remove screws ⓐ and ⓑ, and then slant T.

### Installation

① Make sure that the lock arm spring and lock lever T-B are mounted as shown in Fig. 3-11-3.

② Attach the slant T to the main plate shaft.

③ Secure the slant T with screws ⓐ and ⓑ.

④ Put the FPC cable connected to the A/C head through slant T. Tape it on the reverse of the main plate with pressure sensitive adhesive double coated tape.

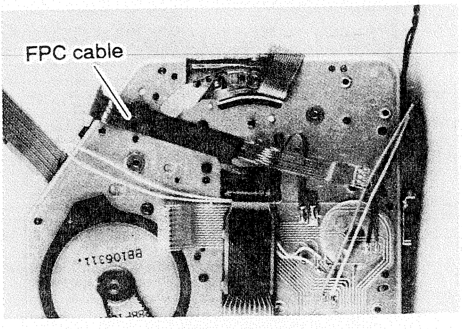


Fig. 3-11-1

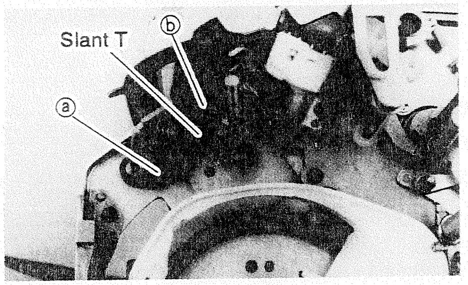


Fig. 3-11-2

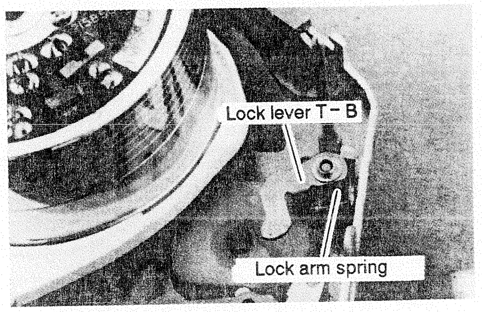


Fig. 3-11-3

## 4-12 Takeup guide arm replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove the A/C head assembly (see para. 4-9).
③ Remove all the components described in para. 4-10-1 (Pinch roller assembly replacement).
④ Remove all the components described in para. 4-11 (Slant T replacement).
⑤ Remove the takeup guide arm from the stator shaft of the capstan motor and pin of the cam lever T.

### Installation

① Attach the takeup guide arm to the stator shaft of the capstan motor so that the positioning pin of the cam lever T fits into the positioning hole in the link rod.
② Attach all the components described in para. 4-11 (Slant T replacement).
③ Attach all the components described in para. 4-10-1 (Pinch roller assembly replacement).
④ Mount the A/C head assembly.
⑤ Mount the cassette housing.

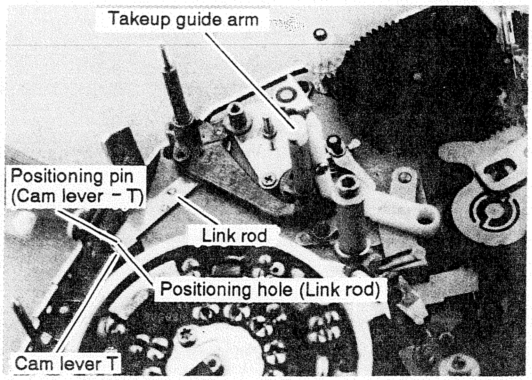

Takeup guide arm
Positioning pin
(Cam lever - T)
Link rod
Positioning hole (Link rod)
Cam lever T

Fig. 3-12-1

## 4-13 Supply impedance roller replacement

### Removal

① Remove the screw ⓐ and then the tape end sensor.
② Remove the impedance spring.
③ Remove the cut washer ⓑ. Pull the supply impedance roller assembly from the main plate shaft.

### Installation

① Attach the supply impedance roller assembly to the main plate shaft and then secure the assembly with the cut washer ⓑ.
② Attach the impedance roller spring.
③ Secure the tape end sensor assembly with the screw ⓐ.

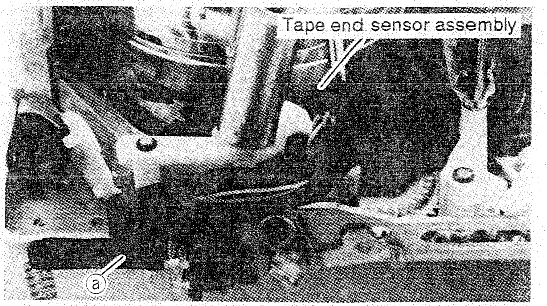

Tape end sensor assembly
ⓐ

Fig. 3-13-1

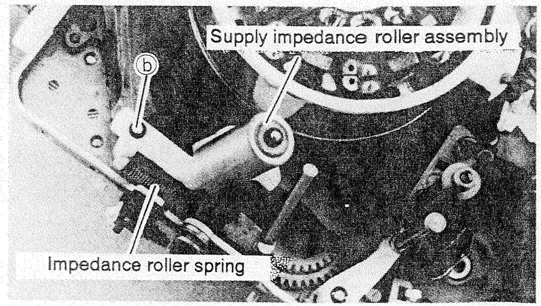

Supply impedance roller assembly
ⓑ
Impedance roller spring

Fig. 3-13-2

## 4-14 Capstan motor replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove all the components described in para. 4-6 (Reel gear replacement).
③ Remove the A/C head assembly (see para. 4-9).
④ Remove all the components described in para. 4-10-1 (Pinch roller assembly replacement).
⑤ Remove all the components described in para. 4-11 (Slant T replacement).
⑥ Remove the lock lever T-B and lock arm spring.
⑦ Remove the takeup guide arm (see para. 4-12).
⑧ Remove screws ⓐ and ⓑ and the tape pilot unit.
⑨ Remove washer ⓒ and the sub pinch roller spring.
⑩ While slightly lifting up the pinch roller lever B, remove the pin roller links A and B.
⑪ Remove the sync belt (see para. 4-7).
⑫ Remove screws ⓓ, ⓔ and ⓕ and then capstan motor.

### Installation

① Pass the FPC cable of the capstan motor through the FPC entry hole in the main plate (Fig. 3-14-1) and under the pinch roller lever B; and then mount the capstan motor on the main plate.
② Secure the capstan motor with screws ⓓ, ⓔ and ⓕ.
③ Attach the sync belt.
④ While slightly liftting up the pinch roller lever B, insert the pin of the pinch roller link A into the hole of the pinch roller lever B. Mount the pinch roller links A and B.
⑤ Referring to Fig. 3-14-2, attach the sub pinch roller spring to the pinch roller link B. Secure the link B with the washer ⓒ shown in Fig. 3-14-1.
⑥ Secure the tape pilot unit with screws ⓐ and ⓑ. Tighten screw ⓐ first.
⑦ Attach the takeup guide arm.
⑧ Attach the lock arm spring and lock lever T-B.
⑨ Attach all the components described in para. 4-11 (Slant T replacement).
⑩ Attach all the components described in para. 4-10-1 (Pinch roller assembly replacement).
⑪ Mount the A/C head assembly.
⑫ Attach all the components described in para. 4-6 (Reel gear replacement).
⑬ Mount the cassette housing.

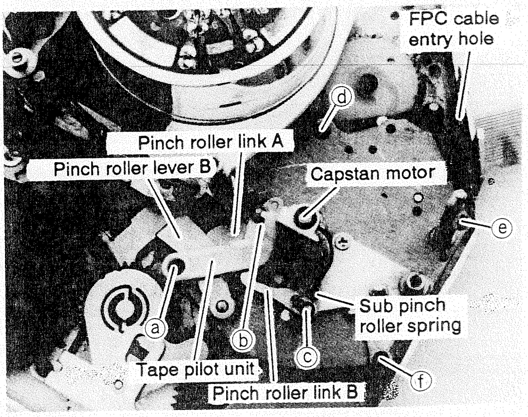


Fig. 3-14-1

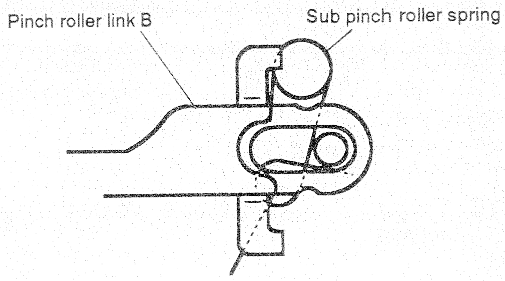


Fig. 3-14-2

## 4-15 Supply tape guide assembly and Supply guide roller replacement

### 4-15-1 Supply tape guide assembly replacement

#### Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove the reel disk (see para. 4-5).
④ Remove the supply impedance roller assembly (see para. 4-13).
⑤ On the FPC sensor board, desolder the two lead wires from the LED of the guide slider assembly.
⑥ Remove the cut washer ⓐ and then regulator tension.
⑦ Remove screws ⓑ, ⓒ and ⓓ, and then guide slider assembly.
⑧ Remove the supply tape guide assembly from the supply lever by moving the tape guide in the direction of arrow (Fig. 3-15-3).

#### Installation

① Attach the supply tape guide assembly to the supply lever by moving the guide in the direction opposite to arrow in Fig. 3-15-3.
② Pass the two lead wires from the LED of the guide slider assembly through the hole in the main plate. Secure the guide slider with screws ⓑ, ⓒ and ⓓ.
③ Solder the two lead wires from the LED mounted on the guide slider assembly to the FPC sensor board.
④ Secure the regulator tension with the cut washer ⓐ.
⑤ Attach the supply impedance roller assembly.
⑥ Mount the reel disk.
⑦ Mount the drum assembly.
⑧ Mount the cassette housing.

### 4-15-2 Supply guide roller replacement

#### Removal

① Remove the cassette housing (see para. 4-1).
② Load the deck to a degree so that the set screw can be turned.
③ Loosen the set screw enough for the guide roller to turn easily.
④ Turn the supply guide roller counter-clockwise and remove it from the supply tape guide.

#### Installation

① Turn the supply guide roller fully clockwise three times to fix it to the supply tape guide.
② Lightly tighten the set screw.
③ Mount the cassette housing.
④ Following the description in para. 5-2, check FM envelope and adjust it as necessary.

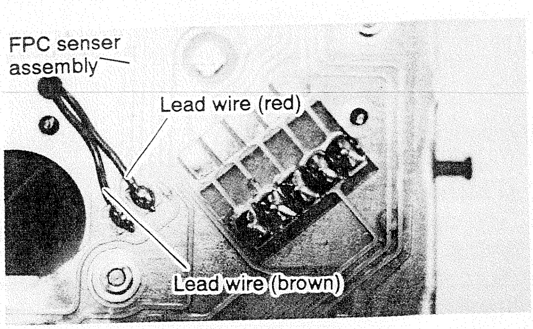

FPC senser assembly
Lead wire (red)
Lead wire (brown)

Fig. 3-15-1

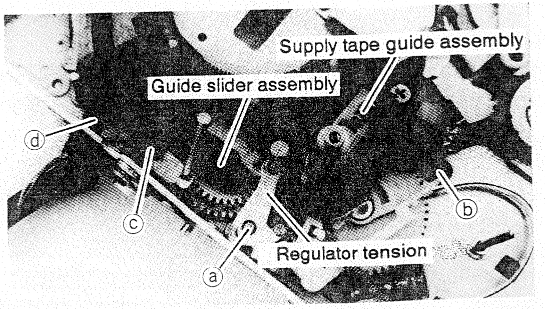

Supply tape guide assembly
Guide slider assembly
ⓓ
ⓒ
ⓑ
Regulator tension
ⓐ

Fig. 3-15-2

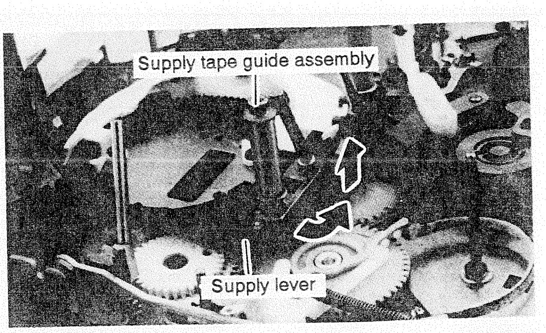

Supply tape guide assembly
Supply lever

Fig. 3-15-3

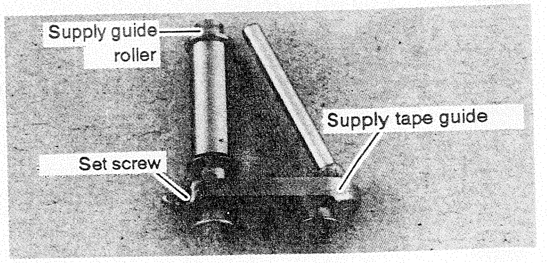

Supply guide roller
Supply tape guide
Set screw

Fig. 3-15-4

## 4-16 Takeup tape guide assembly and Takeup guide roller replacement

### 4-16-1 Takeup tape guide assembly replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove screws ⓐ and ⓑ and then the guide slider T.
④ Slide the takeup tape guide assembly in the direction of arrow (Fig. 3-16-1) and remove it from the guide slider T.
⑤ Remove the cut washer ⓒ and then pull out the takeup tape guide assembly off the takeup arm shaft.

### Installation

① Attach the takeup guide assembly to the takeup arm shaft. Secure the takeup tape guide assembly with the cut washer ⓒ.
② Attach the takeup tape guide assembly to the guide slider T by sliding the guide in the direction opposite to the arrow shown in Fig. 3-16-1.
③ Attach the junction of guide sliders T and R as shown in Fig. 3-16-1. Secure the guide slider T with screws ⓐ and ⓑ.

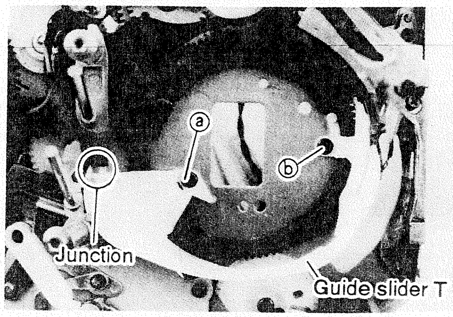


Fig. 3-16-1

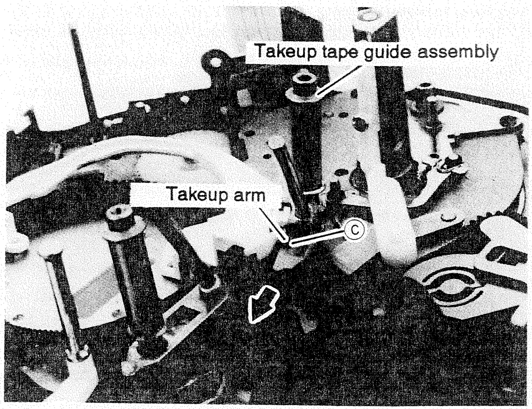


Fig. 3-16-2

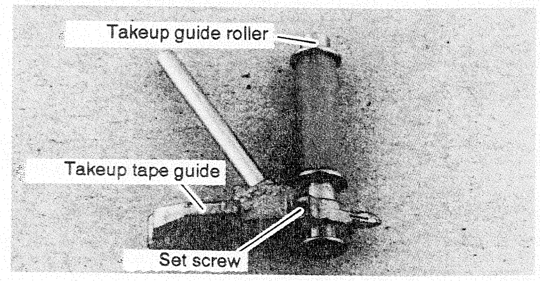


Fig. 3-16-3

### 4-16-2 Takeup guide roller replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Load the deck to a degree so that the set screw can be turned.
③ Loosen the set screw enough to allow the takeup guide roller to turn easily.
④ Turn the takeup guide roller counter-clockwise and remove it from the takeup tape guide.

### Installation

① Turn the takeup guide roller fully clockwise three times to fix it to the takeup tape guide.
② Lightly tighten the set screw.
③ Mount the cassette housing.
④ Following the description in para. 5-2, check FM envelope and adjust it as necessary.

## 4-17 Mode switch replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove the reel disk (see para. 4-5).
④ Remove the supply impedance roller assembly (see para. 4-14).
⑤ Following steps in para. 4-15-1(Supply tape guide assembly replacement), remove the guide slider assembly.
⑥ Remove screws ⓐ and ⓑ and then the guide slider R.
⑦ Remove the tension spring 1.
⑧ Remove the cut washer ⓒ and then the tension spring 2 and tension holder from the main plate shaft.
⑨ Remove the cut washer ⓓ and then the regulator arm from the main plate shaft.
⑩ Desolder the 5 solder terminals of the mode switch on the FPC sensor board.
⑪ Remove screws ⓔ and ⓕ, and then the mode switch.

### Installation

① Make sure that the cam M positioning hole is aligned with the positioning hole in the main plate.
② Place the mode switch on the main plate so that the registration mark on the mode switch is aligned with that on the cam M. Secure the mode switch with screws ⓔ and ⓕ. Check continuity between the mode switch common terminal (COM) and each of other terminals (P0-P3).

The results should be as follows:

Between P0 ······· continuity
Between P1 ······· open
Between P2 ······· continuity
Between P3 ······· open

③ Solder the 5 solder terminals of the mode switch to the FPC board.
④ Fix the regulator arm tension holder and tension spring 2 to the main plate shaft with cut washers ⓒ and ⓓ.
⑤ Attach the tension spring 1.
⑥ Secure the guide slider R with screws ⓐ and ⓑ.
⑦ Mount the guide slider assembly, following the steps in para. 4-15-1 (Supply tape guide assembly replacement).
⑧ Mount the supply impedance roller assembly.
⑨ Mount the reel disk.
⑩ Mount the drum assembly.
⑪ Mount the cassette housing.

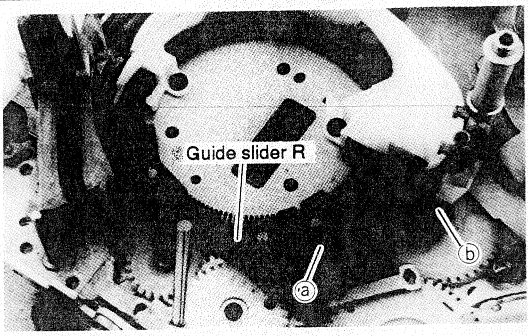

Guide slider R
ⓑ
ⓐ

**Fig. 3-17-1**

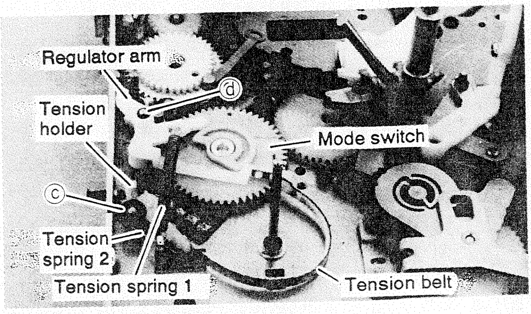

Regulator arm
ⓓ
Tension holder
Mode switch
ⓒ
Tension spring 2
Tension spring 1
Tension belt

**Fig. 3-17-2**

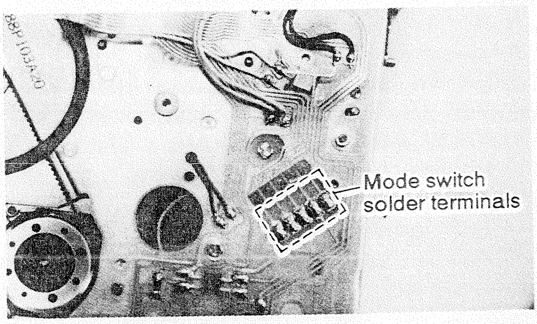

Mode switch solder terminals

**Fig. 3-17-3**

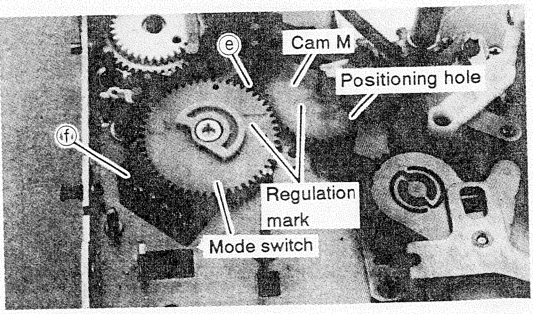

ⓔ
Cam M
Positioning hole
ⓕ
Regulation mark
Mode switch

**Fig. 3-17-4**

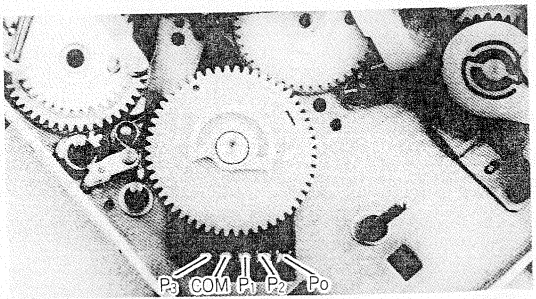

P3
COM
P1
P2
Po

**Fig. 3-17-5**

## 4-18 Cam T replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove all the components described in para. 4-6 (Reel gear replacement).
④ Remove the sync belt (see para. 4-7).
⑤ Remove the A/C head assembly (see para. 4-9).
⑥ Remove the pinch roller assembly (see para. 4-10-1).
⑦ Remove all the components described in para. 4-11 (Slant T replacement).
⑧ Remove the takeup guide arm (see para. 4-12).
⑨ Remove all the components described in para. 4-14 (Capstan motor replacement).
⑩ Remove the spacer and cam lever T.
⑪ Remove the screw ⓐ and then cam T.

### Installation

① Make sure that registration marks and postioning holes of components shown in Fig. 3-18-3 are aligned with corresponding mark and hole of the main plate. Secure the supply cam S and cam S.
② Make sure that the lock lever T-A is attached on the main plate shaft.
③ Align the positioning holes of lock lever T-A, main plate and cam T. Attach the cam T to the main plate mounting shaft. Make sure that the gears of the cam T and takeup ring unit are meshed with each other.
④ Secure the cam T with screw ⓐ.
⑤ Attach the cam lever T and spacer to the main plate mounting shaft. Make sure that the cam T lower pin is in the groove in the cam T.
⑥ Mount all the components described in para. 4-14 (Capstan motor replacement).
⑦ Mount the takeup guide arm.
⑧ Mount all the components described in para. 4-11 (Slant T replacement).
⑨ Attach the pinch roller assembly.
⑩ Mount the A/C head.
⑪ Attach the sync belt.
⑫ Mount all the components described in para. 4-6 (Reel gear replacement).
⑬ Mount the drum assembly.
⑭ Mount the cassette housing.
⑮ Pull out the pin off the positioning hole in the supply cam S and cam S.

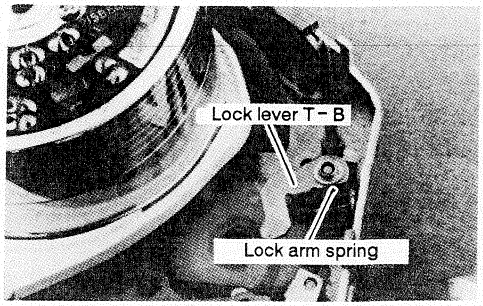

Lock lever T-B
Lock arm spring

Fig. 3-18-1

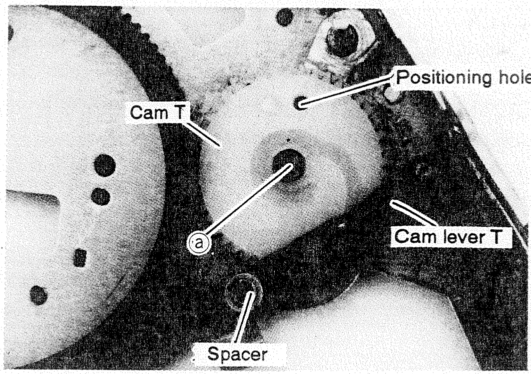

Positioning hole
Cam T
Cam lever T
ⓐ
Spacer

Fig. 3-18-2

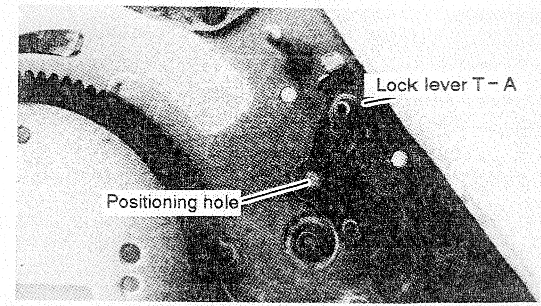

Lock lever T-A
Positioning hole

Fig. 3-18-3

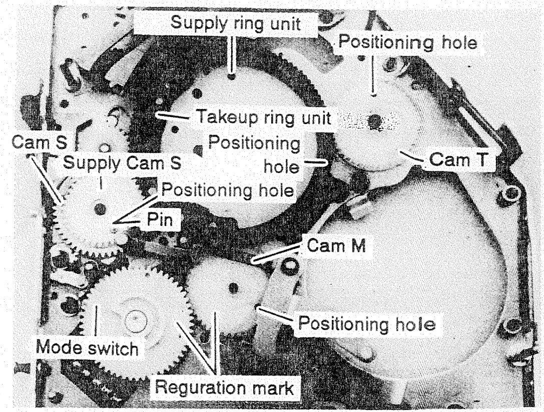

Supply ring unit
Positioning hole
Takeup ring unit
Cam S
Positioning hole
Supply Cam S
Cam T
Positioning hole
Pin
Cam M
Positioning hole
Mode switch
Reguration mark

Fig. 3-18-4

## 4-19 Tape guide stopper assembly replacement

### Removal

① Remove the cassette housing (see para. 4-1).
② Remove the drum assembly (see para. 4-3).
③ Remove one screw ⓐ on the lower to dismount the tape guide stopper assembly and two screws ⓑ and ⓒ on the upper of tape guide stopper assembly.

### Installation

① Fix the tape guide stopper assembly with two screws ⓑ and ⓒ on the upper and one screw ⓐ on the lower.
② Mount the drum assembly.
③ Mount the cassette housing.

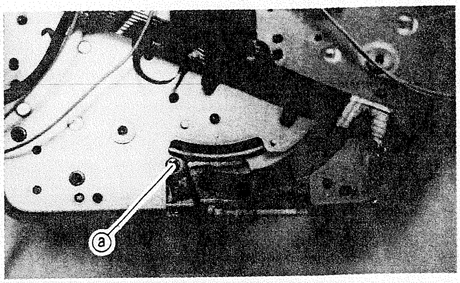


Fig. 3-19-1

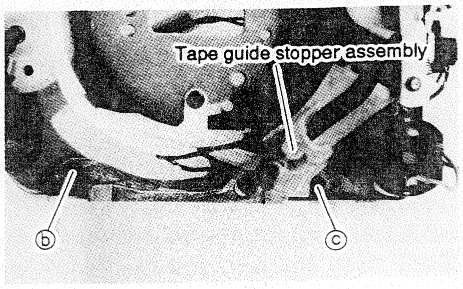


Fig. 3-19-2

# 5. ADJUSTMENTS

## 5-1 Back tension and Tension pole adjustment

① Set the unit to play mode.

② Measure the distance between the regulator tension pole and the internal surface of the main plate: should be 0.7 ± 0.2 mm (Fig. 4-1-1).

③ If the measurement is outside the range, adjust the regulator tension pole position adjuster screw for 0.7 ± 0.2 mm.

④ Set the back tension meter and set the unit to play mode.

⑤ When tape running becomes stable, read the back tension meter.

⑥ The reading should be 15 ± 3 g-cm.

⑦ If not, replace the tension spring 1 with a new one.

⑧ When tape running becomes stable, read the back tension meter, it should not vary 4 g-cm or more.

⑨ If the back tension varies more than 4 g-cm, the cause may be eccentric or defective reel disk. Replace with a new one.

⑩ After adjustment, record and play and check for no skew distortion and other parameters.

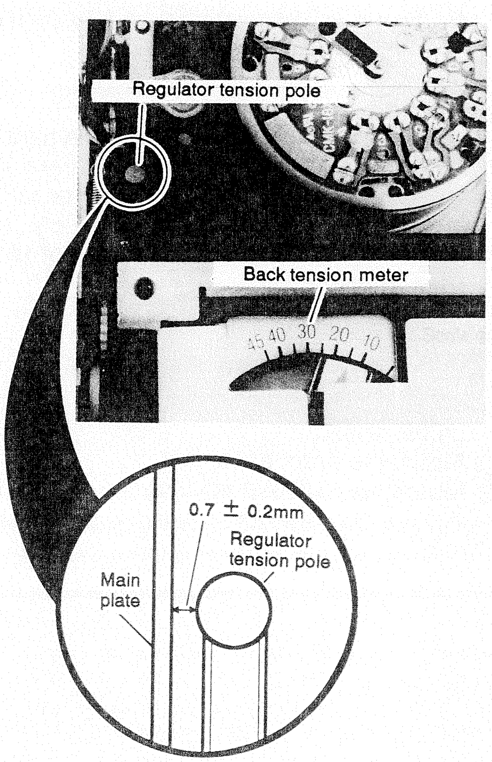

Regulator tension pole
Back tension meter
45 40 30 20 10
0.7 ± 0.2mm
Regulator
tension pole
Main
plate

Fig. 4-1-1

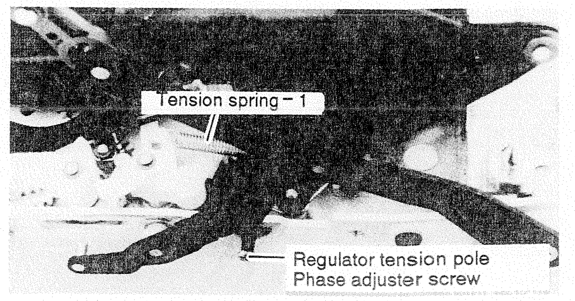

Tension spring-1
Regulator tension pole
Phase adjuster screw

Fig. 4-1-2

## 5-2 FM envelope check and adjustment

### 5-2-1 Guide roller check

① Play back the tape recorded using the recorder being tested.

② Visually check the tape at the supply and takeup guide rollers. There should be no gap between the lower face of the upper flange of the guide roller and the upper edge of the tape; and no wrinkle or crease.

③ Play an alignment tape (PM6KE2C).

④ Connect an oscilloscope to the TP2A. Trigger on the signal on TP5A.

⑤ Connect TP5R and TP5S to ground to force the digital tracking to enter preset mode.

⑥ Make sure that the both positive and negative peaks of the waveform are flat as shown in A of Fig. 4-2-1.

⑦ If the leading portion of FM waveform (supply side of the drum) is not flat (B, C of Fig. 4-2-1), adjust the height of the supply guide roller according to para. 5-2-2. If the period between adjacent FM waveforms is not flat (as waveforms D and E, drum takeup side), adjust the height of the takeup guide roller according to para. 5-2-3.

**Note :**
Turn the power off, and digital tracking mode will be set.

### 5-2-2 Supply guide roller height adjustment

① Loosen the set screw enough for the supply guide roller to turn easily.

② If the leading edge of the FM waveform (at drum supply side) looks like B in the figure, the height of the supply guide roller is low; if looks like C, the roller is high: adjust the height of the guide roller as described below, for obtaining flat waveform (A in the figure).
- Counterclockwise to raise the roller
- Clockwise to lower the roller

③ After adjustment, go to the phase adjustment (coarse).

### 5-2-3 Takeup guide roller height adjustment

① Loosen the set screw enough for the takeup guide roller to turn easily.

② If the period between adjacent FM waveforms (at drum takeup side) looks like D in the figure, the height of the takeup guide roller is low; If looks like E, the roller is high: adjust the height of the guide roller as described below, for obtaining flat waveform (A in the figure).
- Counterclockwise to raise the roller
- Clockwise to lower the roller

③ After adjustment, go to the phase adjustment (coarse).

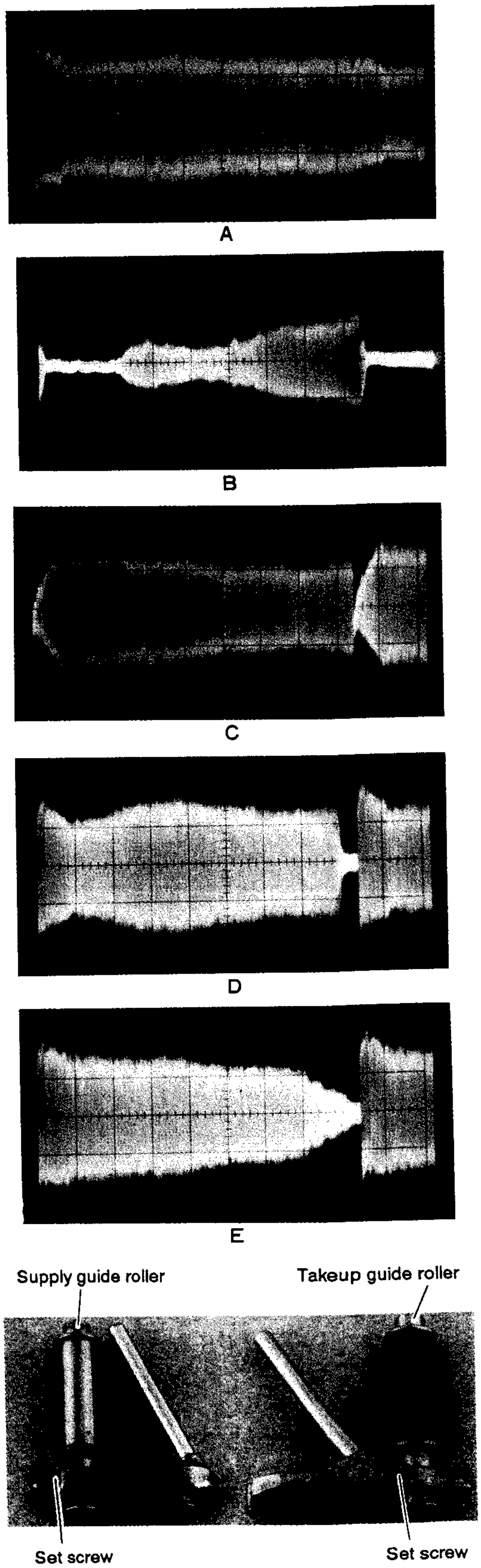


Fig. 4-2-1

## 5-3 Phase adjustment (coarse)

① Play the alignment tape (PMX-C).

② Connect the TP5R and TP5S of the PCB VTR to ground to force the digital tracking to enter preset mode.

③ Connect TP2A (PCB VTR) to CH-1, and audio output terminal to CH-2 of the oscilloscope. Trigger the scope on the signal from the TP5A (PCB VTR).

④ Absence of FM waveform and audio waveform should be almost conincidental (A of Fig.4-3-1).

⑤ If the absence of FM waveform and audio waveform is completely out of phase as shown in B or C of the figure, turn the phase adjuster screw clockwise until the FM waveform looks like the waveform in A.

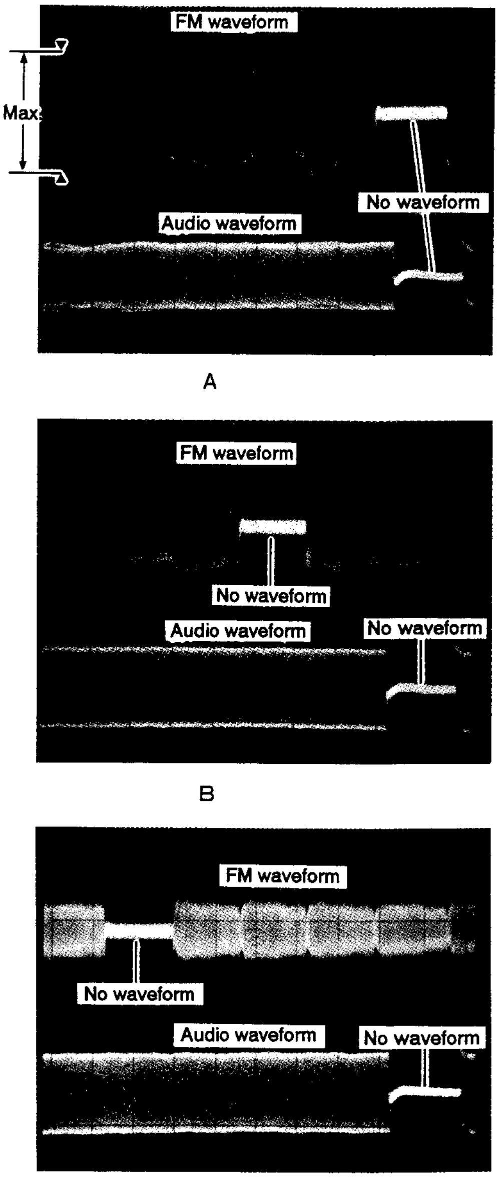
⑥ Exchange the alignment tape (PMX-C) for an another one (PM6KE2C).

⑦ Fine tune the phase adjuster screw fo maximum FM wave amplitude without changing its phase with respect to that of audio signal.

⑧ After adjustment, apply locking material (paint or the like) to the phase adjuster screw.

**Note :**

Turn the power off, and digital tracking mode will be set.



A

B

C

Fig. 4-3-1

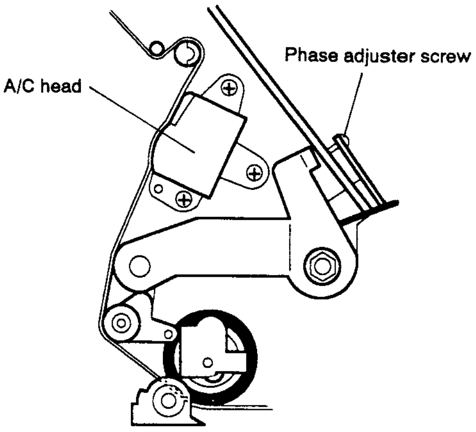


Fig. 4-3-2

## 5-4 FM waveform flatness check

① Play the alignment tape (PM6KE2C).

② Connect the oscilloscope to TP2A. Trigger on the TP5A output.

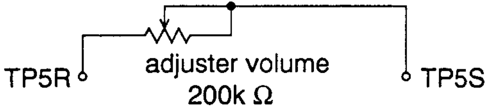
③ Connect the TP5R and TP5S of the VTR board to ground to force the digtal tracking to enter the preset mode.

④ Press PAUSE button. This enters manual digital tracking mode, enabling manual adjustment of tracking.

**Note :**

Installing manual tracking adjustment Connect a variable resistor (200k Ω ) between TP5S and TP5R.

This variable resistor is the manual tracking adjustment.



⑤ Turn the manual tracking adj., verify that the amplitude of the FM waveform varies while remaining flat.

⑥ Set the manual tracking for maximum amplitude. Adjust vertical gain of the oscilloscope so that the waveform amplitude equals 5 divisions on the scope graticule.

⑦ Adjust the manual tracking adj. so that the middle portion(Portion "b" in Fig. 4-4-1) of the waveform is 80% the maximum amplitude, i.e. 4 divisions of the scope graticule. Verify that the FM waveform amplitude at drum supply side (portion "a" in the figure) and takeup side ( portion "b" in the figure)are at 3.2 divisions of graticule.

⑧ If these values are not met, repeat the adjustment steps.

**Note :**

Turn the power off, and digital tracking mode will be set.

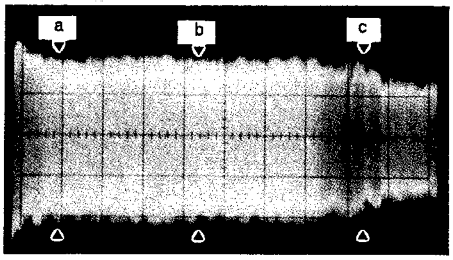


Fig. 4-4-1

### 5-5 A/C head adjustment

### 5-5-1 A/C head height, azimuth and slant adjustment

① Play the tape recorded using the recorder being adjusted.

② Alternately adjust the A/C head height adjuster screw and azimuth screw (ⓐ,ⓑ in Fig. 4-5-1) so that the top edge of the tape comes just below the top of the audio head as shown in Fig. 4-5-2.

③ Play the alignment tape (PM6KE2C).

④ Connect the oscilloscope to an audio output terminal (CH R or L).

⑤ Alternately adjust A/C head height adjuster screw and azimuth adjuster screw (ⓐ, ⓑ) so that the audio output is maximum.

⑥ Play the tape used in step (1).

⑦ Verify that the tape position at the takeup guide arm roller is as shown in Fig. 4-5-4, "A" (lower tape edge is at the level of top face of the lower flange of the roller).

⑧ If the tape is positioned as shown in B or C of Fig. 4-5-4, adjust the A/C head slant adjuster screw ( ⓒ in Fig. 4-5-1) to bring the tape to the position shown in A of Fig. 4-5-4.

When it looks like B: turn the screw ⓒ clockwise.

When it looks like C: turn the screw ⓒ counterclockwise.

**Note :**

Because the tape will not quickly respond to height adjustment, turn the screw ⓒ a little at a time, and then observe the tape for a while; and readjust as necessary.

⑨ After adjusting, disengage the tape. Reengage the tape and make sure that the tape comes at the position A of Fig. 4-5-4 in one second.

⑩ If the tape fails step ⑨, repeat steps ⑦ to ⑨.

**Note :**

One cycle of above steps may not bring satisfactory result. These steps may have to be repeated for fine tuning.

⑪ When the adjustment is complete, apply screw locking material (paint or the like) to A/C head adjuster screws ⓐ, ⓑ and ⓒ.

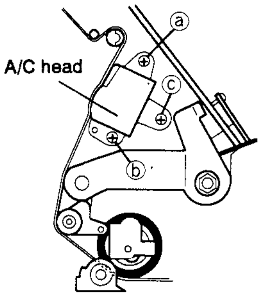


Fig. 4-5-1

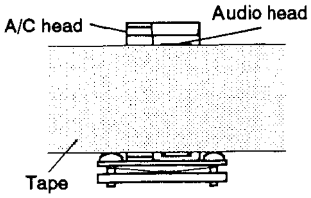


Fig. 4-5-2

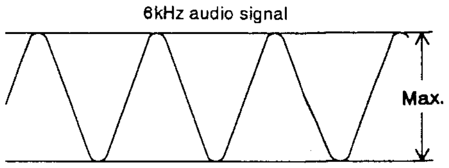


Fig. 4-5-3

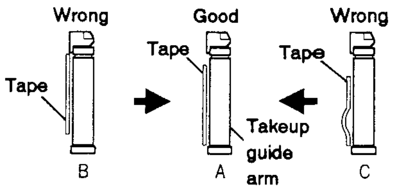


Fig. 4-5-4

## 5-6 GR-lever roller tape runing adjustment

**Note:**
This adjustment must follow the GR- lever roller height adjustment.

① Play a tape recorded using the recorder being adjusted.
② Observe status of the tape passing the GR lever roller against status illustrations in Fig. 4-6-1.
③ If the tape status looks like C or D in Fig. 4-6-1, adjust the GR-lever height adjuster nut shown in Fig. 4-6-2 so that the tape condition is A or B in Fig. 4-6-1.
**Note:**
Do not turn the GR- lever height adjuster nut more than 1/2 turn.
④ After adjustment, unload the tape. Load the tape again and set to play mode, and make sure the tape becomes status A or B in one second.
⑤ If not, repeat the step ③.

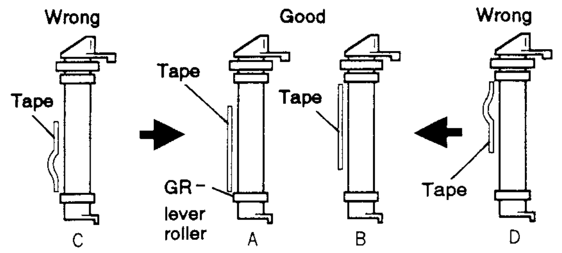


Fig. 4-6-1

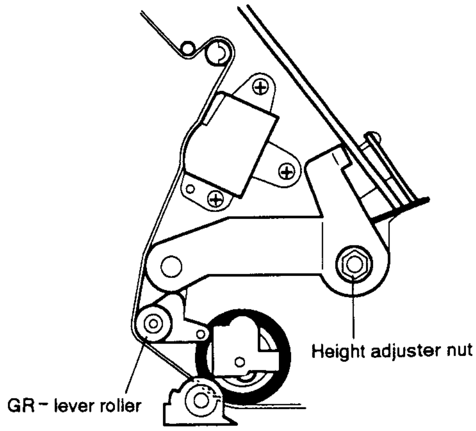
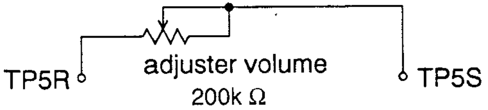


Fig. 4-6-2

## 5 - 7 Phase adjustment (fine)

① Connect the oscilloscope to TP2A and trigger on the signal from the TP5A.
② Play the alignment tape. [PM3KE6(CH1)C35]
③ Connect the TP5R and TP5S of the VTR board to ground to force the digital tracking to enter the preset mode.
④ Adjust the phase adjuster screw so that the FM waveform is maximum.
⑤ Press PAUSE button. This enters manual digital tracking mode, enabling manual adjustment of tracking.
**Note:**
Installing manual tracking adjustment Connect a variable resistor (200k Ω ) between TP5S and TP5R.
This variable resistor is the manual tracking adjustment.



⑥ Adjust the manual tracking adj. so that the FM waveform is maximum aplitude. Adjust the vertical gain control of the oscilloscope so that the FM waveform swings across 5 divisions on the graticule.
⑦ Press the pause button. The digital tracking is now in preset mode.
⑧ Verify that the amplitude is 4.8 divisions or more on the scope graticule.
⑨ If the amplitude is lower than this value, clean the drum by following the stels of para. 2 - 1 (Cleaning the video heads).
⑩ Repeatedly load and unload a tape for use with the recorder, verify that the FM waveform won't vary.
**Note :**
Turn the power off, and digital tracking mode will be set.

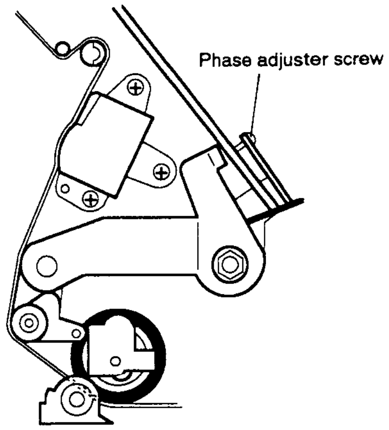


Fig. 4-7-1

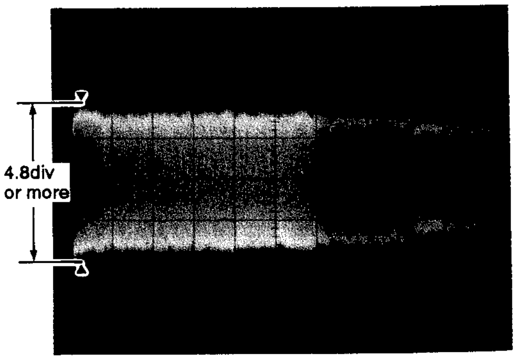


Fig. 4-7-2

# KEY TO ABBREVIATIONS

**A/C** : Audio/Control
**ACC** : Automatic Color Control
**A.E** : Audio Erase
**AFC** : Automatic Frequency Control
**AFT-D** : Automatic Fine Tuning Door Switch
**AGC** : Automatic Gain Control
**AL** : After Load
**AMP** : Amplifier
**ANT** : Antenna
**A-PB** : Audio-Playback
**A-REC** : Audio-Recording
**ALC** : Automatic Level Control

**B-FS** : Brake Forward Search
**B-RS** : Brake Reverse Search
**BPF** : Band-Pass Filter
**B/W** : Black and White
**BS** : Band SW

**CASS** : Cassette
**CP** : Capstan
**CP-FG** : Capstan-Frequency Generator
**CP-F/R** : Capstan-Forward/Reverse
**CP-M** : Capstan-Motor
**CONV** : Converter
**CTL** : Control
**C-LAMP** : Cassette Lamp
**C-I LAMP** : Cassette Indicator Lamp
**CE** : Chip Enable
$\overline{\text{CE}}$ : Not Chip Enable
**CK** : Clock
**CL** : Clear
**CNT** : Counter
**CP R-R** : Capstan Reverse Rotation
**CS-1** : Cassette Switch 1
**CS-2** : Cassette Switch 2

**DAL** : Delay-After Loading
**DEMOD** : Demodulator
**DET** : Detector
**DL** : Delay Line
**DL-REV** : During Reverse
**DL-FWD** : During Forward
**DOC** : Drop Out Compensator
**DL-SL** : During Slow
**DL-**$\overline{\text{SS}}$ : During Not Speed Search
**DOP** : Drop Out Pulse

**EF** : Emitter Follower
**EMPHA** : Emphasis
**EQ** : Equalizer
**EE** : Electronic-Electronic
**ES** : End Sensor

**FE-H** : Full Erase Head
**FF** : Fast Forward
**FG** : Frequency Generator
**FL-SW** : Front Loading SW
**FLM** : Front Loading Motor
**F/R-SW** : FF/Rewind Switch
**F/R** : Forward/Reverse
**FS** : Forward Search

**G** : Ground

**HE** : Hall Element
**H-LED** : Humidity-LED
**H-SENS** : Humidity-Sensor
**HPF** : High-Pass Filter

**LIM** : Limiter
**LPF** : Low-Pass Filter
**LM** : Loading Motor

**MDA** : Motor Drive Amplifier
**MC** : Mechanical Control
**MIC** : Microphone
**MOD** : Modulator

$\overline{\text{N}}$ : Not Normal

**OPE** : Operation
**OSC** : Oscillator
**O-PWV** : ON/OFF Command from Remote Decoder

**PB** : Play Back
**PG** : Pulse Generator
**P/R-SW** : P.B/REC-SW
**PCB** : Printed Circuit Board
**PIC** : Picture Control
**P/R** : Play/Record
**PSC** : Pulse swallow control
**PWT-SET** : Power TV Set
**PWV** : ON/OFF Command to B+ Switching Circuit

**REC** : Recording
**REF** : Reference
**RIS** : Record Inhibit Switch
**REW** : Rewind
**REG** : Regulator
**RS** : Reverse Search
**REC-2** : Record Command for the Fine Editing Circuit
**R-FS** : Reel Drive Forward Search
**R-P/R** : Reel Drive Play/Record

**S/AL** : Stop After Load
**SL** : Slow
**SLOK** : Slow OK
**S/P** : Still/Pause
**SS** : Start Sensor
**SRV-REC** : Servo Record
$\overline{\text{SS}}$ : Not Speed Search
**S-STOP** : Stop Command
**STOK** : Still OK
**STW** : Stop Watch
**SENS** : Sensor
**STBY** : Stand By

**TM** : Take up Motor
**T-REC** : Timer-Record
**T.P** : Test Point
**TR** : Transistor
**TU-P** : Tuner-Power

**UL** : Unload

**VS** : Voltage Synthesizer
**V.SYNC** : Vertical Sync
**VCO** : Voltage Controlled Oscillator
**VXO** : Variable Crystal Oscillator

**W/D** : White/Dark

**X'OSC** : Crystal Oscillator

**Y/C** : Luminance/Chrominance

# CHIP PARTS REPLACEMENT

## CHIP PARTS REPLACEMENT

Some resistors, shorting jumpers (0Ω resistor), ceramic capacitors, transistors and diodes are chip parts which are used for certain circuit elements. When replacing these parts, note the cautions as follows.

**Cautions:**

A. Use fine tipped, well insulated soldering pencil (iron) about 30 watts and the tweezers.
B. Melting the solder, remove the Chip Parts carefully not to tear off the copper foil of the printed circuit board.
C. Discard removed chips; do not reuse them.
D. Do not apply heat for more than 3 seconds to the new chip Parts.
E. Avoid using a rubbing stroke when soldering.
F. Take care not to scratch when soldering, or damage the Chip Parts.
G. Supplementary cementing is not required.

### 1 Removal of chip Parts (Resistors, capacitors, etc.)

A. Grasp the part with tweezers. Melting the solder at both side alternately, remove the one side of the part with a twisting motion.
B. Melt the solder at the other side and remove the part.

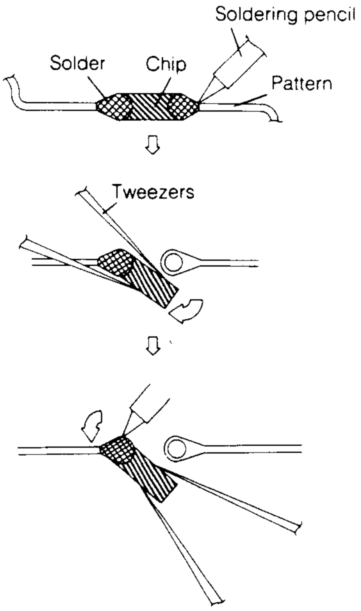

Soldering pencil
Solder
Chip
Pattern
Tweezers

Fig. 1

### 2 Removal of Chip Parts (Transistors)

A. Melting the solder of one lead, Lift the side of that lead upward.
B. Simultaneously melt the solder of the two remaining leads and lift the part to remove.

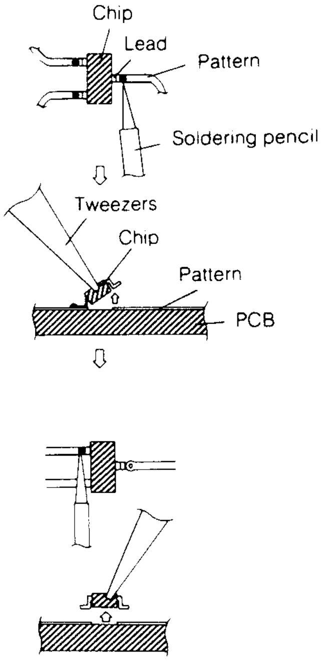

Chip
Lead
Pattern
Soldering pencil
Tweezers
Chip
Pattern
PCB

Fig. 2

### 3 Replacement

A. Presolder the contact points of the circuit pattern.
B. Press the part downward with tweezers and apply the soldering pencil as shown in the figure.

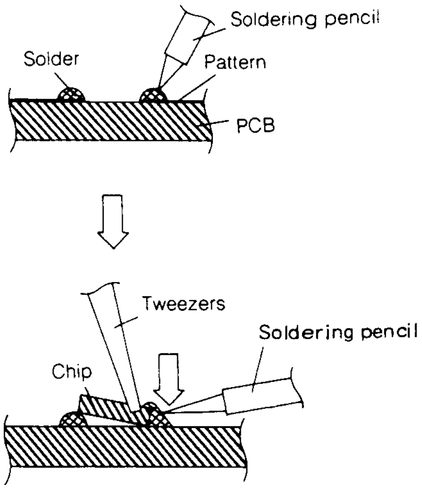
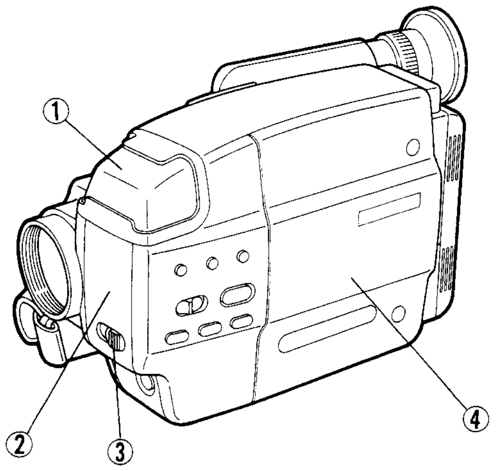
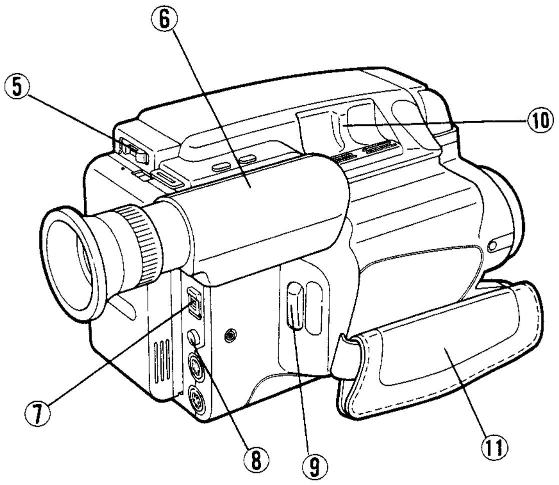

Soldering pencil
Solder
Pattern
PCB
Tweezers
Soldering pencil
Chip

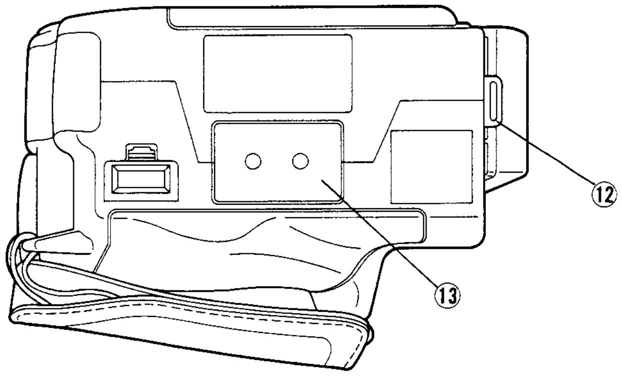
Fig. 3

# PARTS LIST

## 1.Outer parts

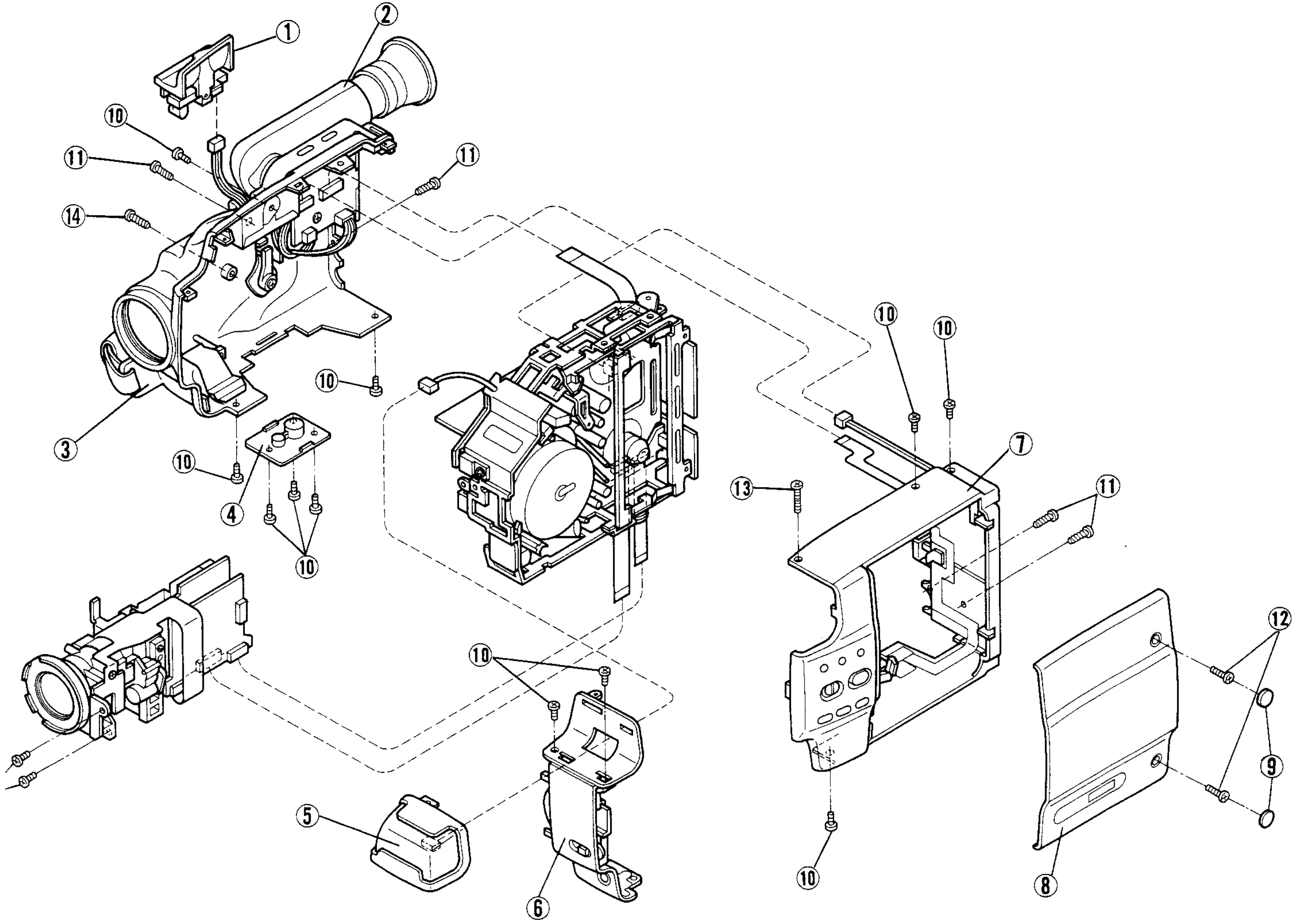






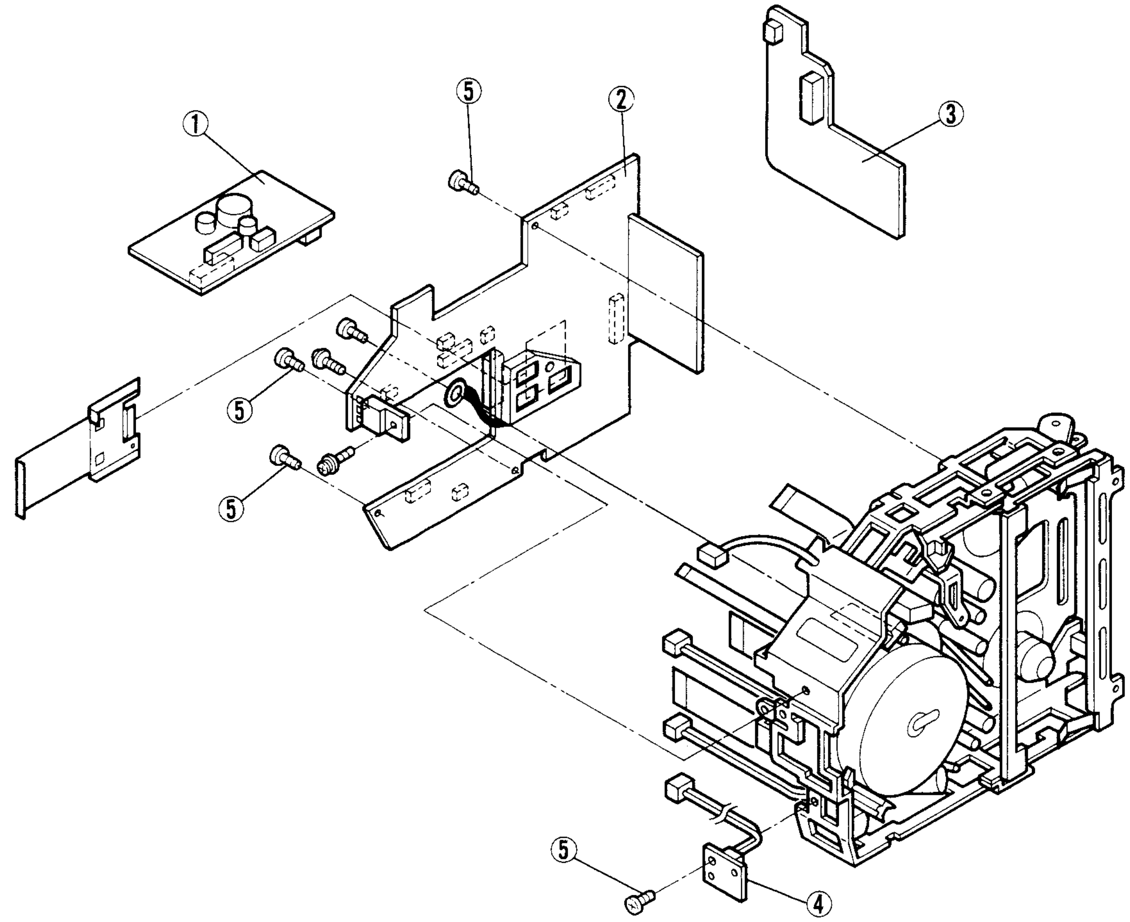
| ITEM NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| 1 | 485P017010 | MICROPHONE UNIT | |
| 2 | 701B233030 | FRONT PANEL UNIT | |
| 3 | 734D542010 | LENS COVER KNOB | |
| 4 | 702B828090 | CASSETTE HOUSING | |
| 5 | 704C803010 | POWER KNOB | |
| 6 | 939P438030 | EVF UNIT | |
| 7 | 704C804010 | EJECT KNOB | |
| 8 | 704C802010 | RELEASE BUTTON | |
| 9 | 704C800010 | TRIGGER BUTTON | |
| 10 | 439P030010 | ZOOM SWITCH | |
| 11 | 772C016020 | GRIP BELT | |
| 12 | 768D143010 | STRAP HOLDER | |
| 13 | 769C004010 | TRIPOD BASE | |

## 2.Cabinet parts



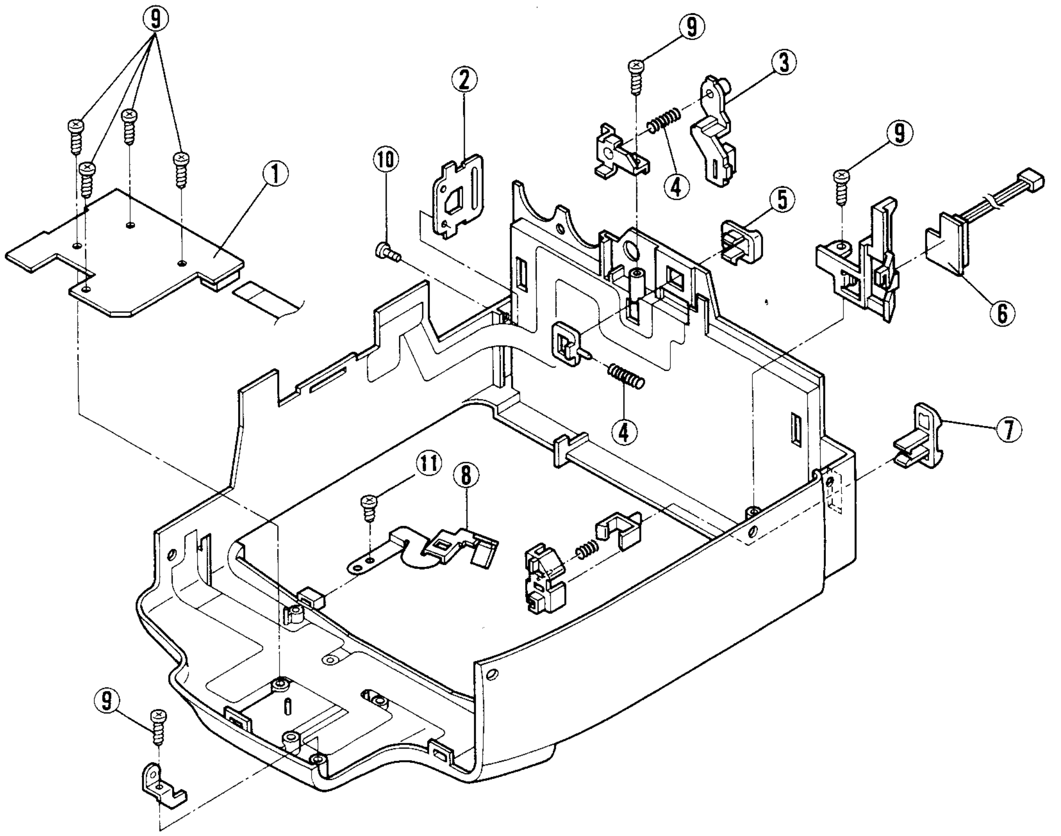
| ITEM NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| 1 | 439P030010 | ZOOM SWITCH | |
| 2 | 939P438030 | EVF UNIT | |
| 3 | 701B231090 | CASE UNIT(L) | |
| 4 | 769C004010 | TRIPOD BASE | |
| 5 | 485P017010 | MICROPHONE UNIT | |
| 6 | 701B233030 | FRONT PANEL UNIT | |
| 7 | 701B232040 | CASE UNIT(R) | |
| 8 | 702B828090 | CASSETTE HOUSING | |
| 9 | 722D008010 | SEAL | |
| 10 | 669D372010 | SCREW | M2×4 |
| 11 | 669D410010 | SCREW(TAPPING) | 2×6 |
| 12 | 669D317030 | SCREW | M2×0.4-5 |
| 13 | 669D372040 | SCREW | M2×10 |
| 14 | 669D410020 | SCREW(TAPPING) | 2×8 |

## 3.Chassis Assembly Parts



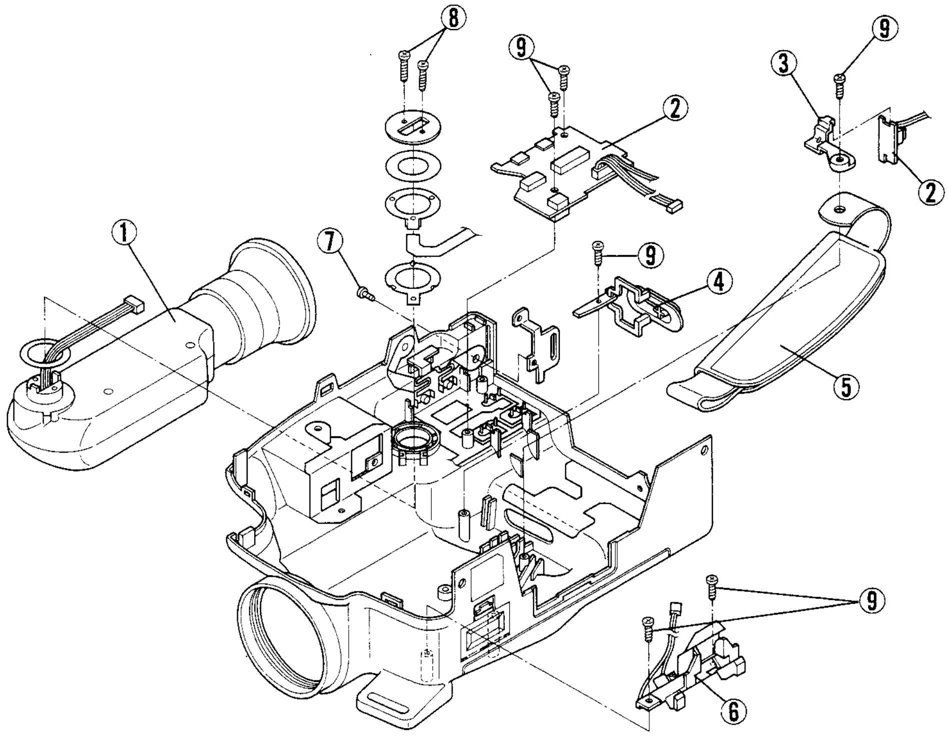
| ITEM NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| 1 | 928C719005 | VTR-SUB PCB ASSY | |
| 2 | 927B621001 | VTR PCB ASSY | |
| 3 | 928C795001 | REAR PCB ASSY | |
| 4 | 939P439020 | CAMERA SW UNIT | FADE |
| 5 | 669D372010 | SCREW | M2×4 |
| 6 | 669D451010 | SCREW | M2×0.4-6 |

## 4.Case Assembly(Right side) Parts



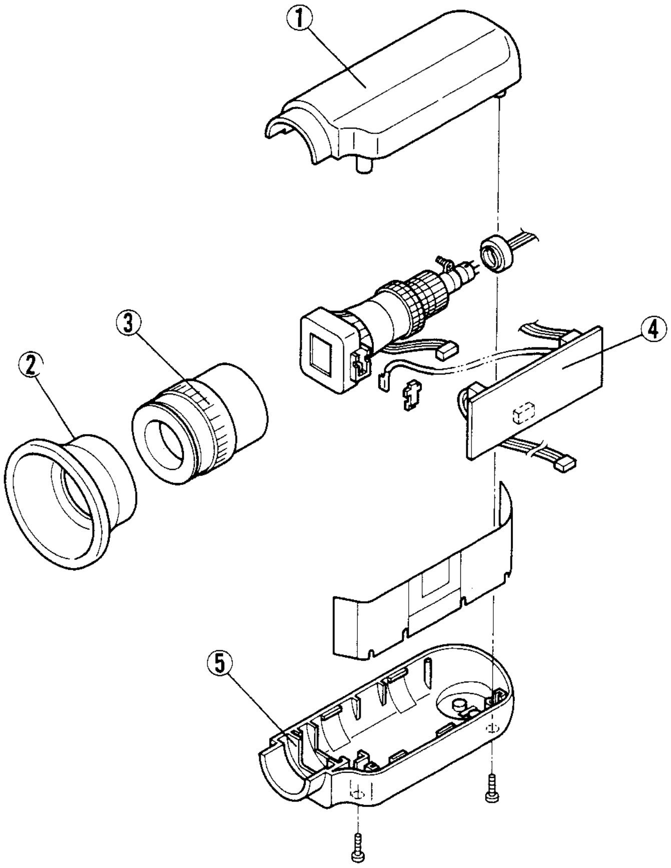
| ITEM NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| 1 | 939P439010 | CAMERA SW UNIT | MENU + |
| 2 | 768D143010 | STRAP HOLDER | |
| 3 | 704C802010 | RELEASE BUTTON | |
| 4 | 572D535010 | EJECT SPRING | |
| 5 | 704C804010 | EJECT KNOB | |
| 6 | 928C725001 | POWER SW PCB ASSY | |
| 7 | 704C803010 | POWER KNOB | |
| 8 | 621D767020 | TAPE GUIDE | |
| 9 | 669D435030 | SCREW(TAPPING) | 1.7×6 |
| 10 | 669D372010 | SCREW | M2×4 |
| 11 | 669D435010 | SCREW(TAPPING) | 1.7×4 |

## 5.Case Assembly(Left side) Parts

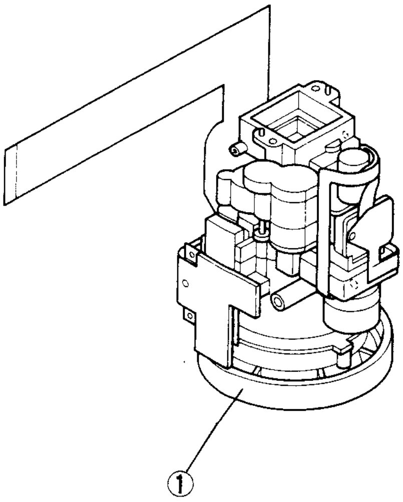


| ITEM NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| 1 | 939P438030 | EVF UNIT | |
| 2 | 928C746006 | VTR SW PCB ASSY | |
| 3 | 621C114010 | RETAINER BELT | |
| 4 | 704C800010 | TRIGGER BUTTON | |
| 5 | 772C016020 | GRIP BELT | |
| 6 | 701C026010 | BACK UP BATTERY HOLDER | |
| 7 | 669D372020 | SCREW | M2×6 |
| 8 | 669D322070 | SCREW(TAPPING) | 2×8 |
| 9 | 669D435030 | SCREW(TAPPING) | 1.7×6 |

## 6.EVF(Electronic View Finder) unit Parts

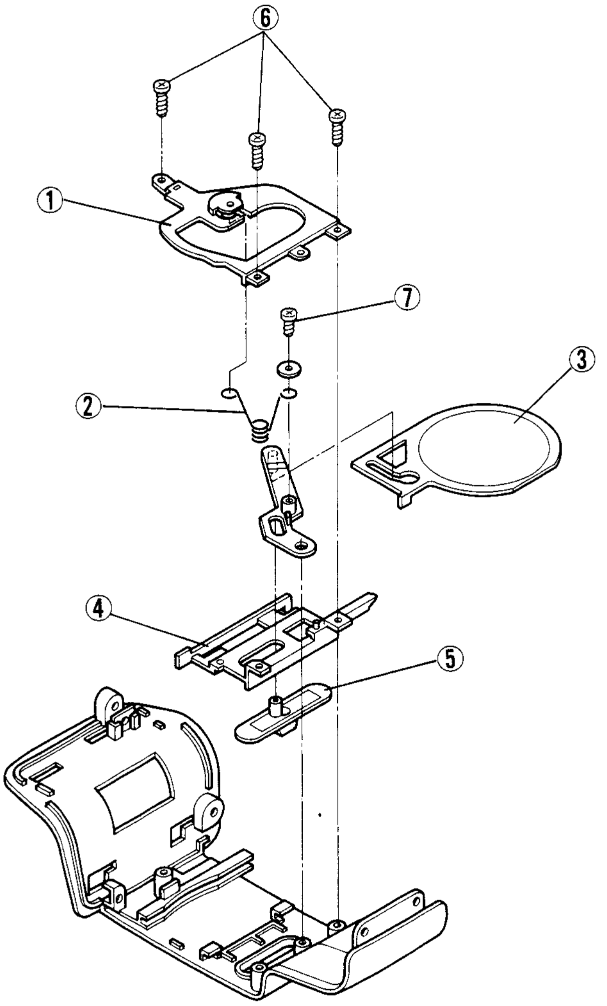


## 7.Camera unit Parts

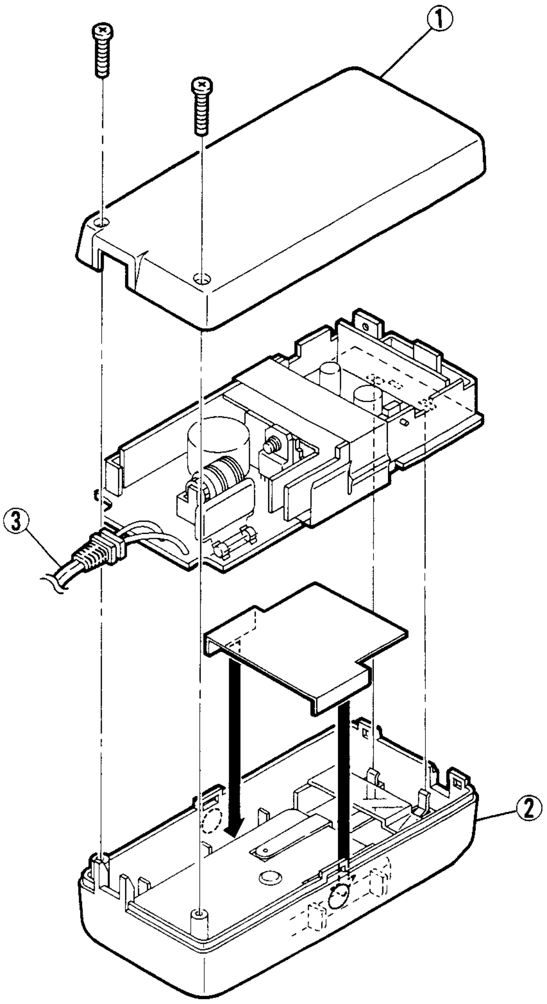


| ITEM NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| | | **EVF UNIT** | |
| 1 | 701D073050 | TOP CASE | |
| 2 | 765D039040 | EYE CAP | |
| 3 | 409D009070 | LENS ASSY(EVF) | |
| 4 | 928D041030 | EVF PCB ASSY | |
| 5 | 701D073060 | BOTTOM CASE | |
| | | **LENS UNIT** | |
| 1 | 490P093010 | LENS UNIT | |

## 8.Front panel Assembly Parts

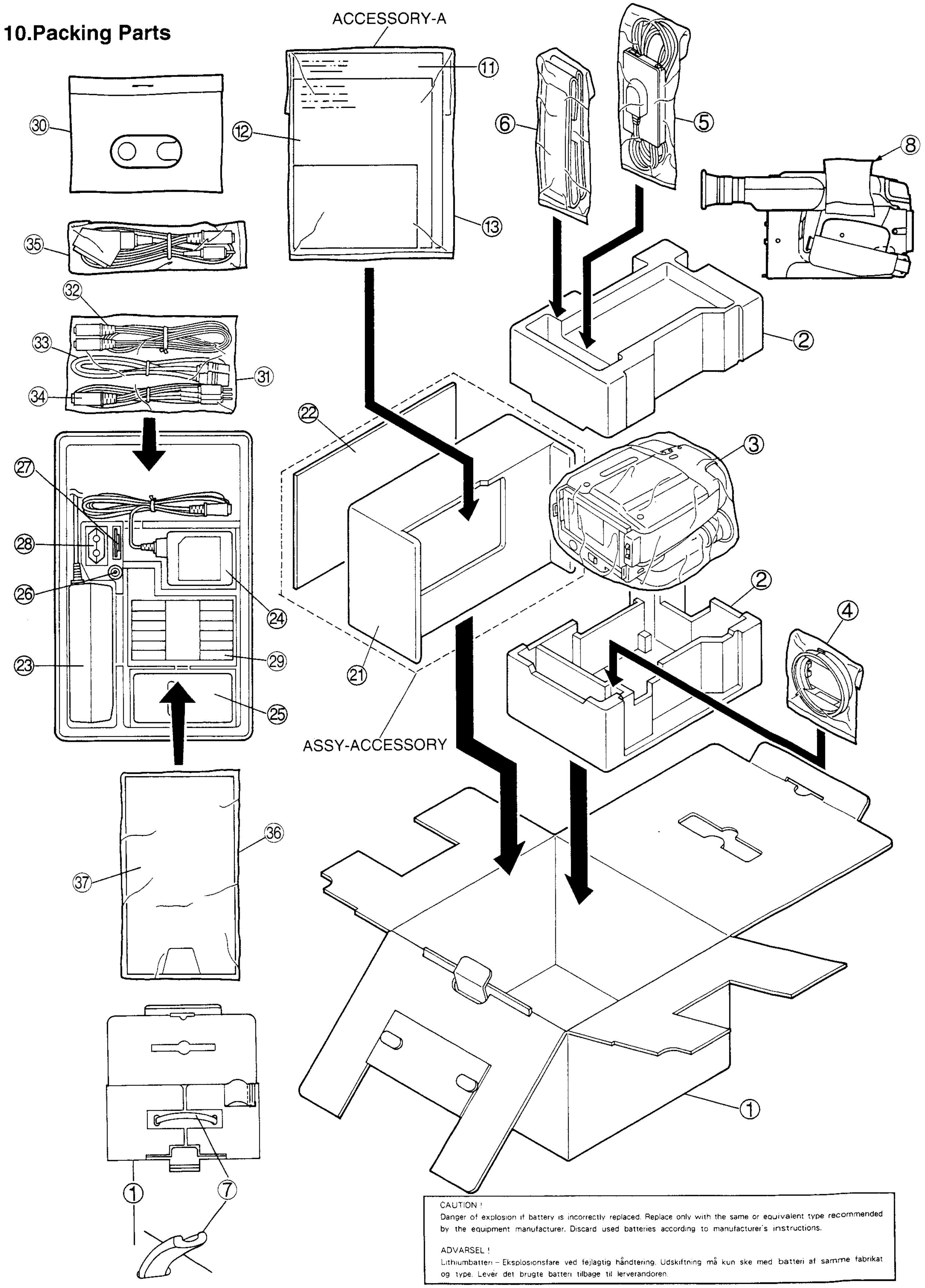


## 9.AC Power Adapter Parts



| ITEM NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| | | **FRONT PANEL UNIT** | |
| 1 | 621C125010 | LENS COVER HOLDER | |
| 2 | 572D573010 | LENS COVER SPRING | |
| 3 | 761D718010 | LENS COVER | |
| 4 | 621C149010 | KNOB HOLDER | |
| 5 | 734D542010 | LENS COVER KNOB | |
| 6 | 669D435030 | SCREW(TAPPING) | 1.7×6 |
| 7 | 669D435010 | SCREW(TAPPING) | 1.7×4 |
| | | **AC POWER ADAPTER** | |
| 1 | 700D029030 | BOTTOM CASE | [E] |
| 1 | 700D029040 | BOTTOM CASE | [B] |
| 1 | 700D029050 | BOTTOM CASE | [A] |
| 2 | 700D028030 | TOP CASE | |
| 3 | 242D410030 | AC POWER CORD | [E] |
| 3 | 242D410040 | AC POWER CORD | [B] |
| 3 | 242D410050 | AC POWER CORD | [A] |
| | | Note: Broken AC power cord must be exchanged with a new original power cord. | |

## 10.Packing Parts


ACCESSORY-A
⑪
⑫
⑬
⑥
⑤
⑧
㉚
㉟
㉜
㉝
㉛
㉞
②
㉒
③
㉗
㉘
㉖
㉔
㉓
㉙
㉕
②
④
㉑
ASSY-ACCESSORY
㊱
㊲
①
①
⑦

CAUTION !
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

ADVARSEL !
Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

| ITEM NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| PACKING PARTS | | | |
| 1 | 801C129010 | PACKING CASE | [E] |
| 1 | 801C129020 | PACKING CASE | [B] |
| 1 | 801C129030 | PACKING CASE | [A] |
| 2 | 803A282010 | PACKING CUSHION | |
| 3 | 831D177070 | PACKING BAG | |
| 4 | 702C999010 | ATTACHMENT RING | |
| 5 | 939P437020 | DC CABLE UNIT | |
| 6 | 772P021020 | SHOLDER BELT | |
| 7 | 829D094010 | QUICK HAND | |
| 8 | 831D268020 | CUSHION SHEET | |
| ACCESSORY – A | | | |
| 11 | 872C041040 | INSTRUCTION BOOK | |
| 11 | 872C041050 | INSTRUCTION BOOK | [E] |
| 11 | 872C041060 | INSTRUCTION BOOK | [E] |
| 12 | 851B930010 | SHEET CAUTION | |
| 13 | 831D181020 | PACKING BAG | |
| ASSY – ACCESSORY | | | |
| 21 | 803A283010 | PACKING CUSHION | |
| 22 | 801C130060 | PACKING SHEET | [E] |
| 22 | 801C130070 | PACKING SHEET | [B] |
| 22 | 801C130080 | PACKING SHEET | [A] |
| 23 | 939P450010 | AC ADAPTER | [E] |
| 23 | 939P450020 | AC ADAPTER | [B] |
| 23 | 939P450030 | AC ADAPTER | [A] |
| 24 | 295P290010 | RF CONVERTER | DAR-M1EB[B] |
| 24 | 295P291010 | RF CONVERTER | DAR-M1A[A] |
| 25 | 939P455010 | BATTERY PACK | BY-M1 |
| 26 | ---------- | BATTERY | SUM-3(L) × 1 |
| 27 | 283P035020 | BACK UP BATTERY | Lithium battery CR2025 |
| 28 | 451C072010 | AC JACK | [E] |
| 29 | ---------- | C-VIDEO CASSETTE | SE-C30 |
| 30 | 761C462010 | JACK CAP | |
| 31 | 831D252010 | PACKING BAG | |
| 32 | 242D335060 | S-CABLE | 1.5m |
| 33 | 242D231030 | RF CABLE | 1.5 m[B, A] |
| 34 | 243C062010 | AV CABLE | RCA PIN PLUG 4pcs. [A] |
| 35 | 246C139010 | AV CABLE | EURO AV + RCA PIN PLUG 1pc. [E, B] |
| 36 | 831D252040 | PACKING BAG | |
| 37 | 908C137002 | CASSETTE ADAPTER | |

## 11. ELECTRICAL PARTS

### INTEGRATED CIRCUITS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| IC 2R1 | 274P121020 | IC | MB88346B |
| IC201 | 272P548010 | IC | AN3348FBP |
| IC2A1 | 272P672010 | IC | M52351FP |
| IC2AA | 263P567010 | IC | MN5181 |
| IC2AB | 263P566010 | IC | MN3110SA |
| IC2AC | 272P604010 | IC | CXA1439M |
| IC2AD | 263P220010 | IC | SC7SU04F |
| IC2J1 | 272P489010 | IC | VC2076MP |
| IC2P1 | 272P749010 | IC | TL8819F |
| IC2R1 | 274P121020 | IC | MB88346B [E] |
| IC2001 | 272P668010 | IC | AN3580SB |
| IC2002 | 272P546010 | IC | MM1031XMR |
| IC300 | 272P375010 | IC | BA7757BK |
| IC350 | 272P675010 | IC | BA3308F |
| IC3A0 | 272P541010 | IC | AN3935NFHP |
| IC3AA | 272P700010 | IC | AN2163FHP |
| IC3AB | 274P054020 | IC | MN3823S |
| IC3AC | 274P053020 | IC | MN3824S |
| IC3AD | 274P121020 | IC | MB88346B |
| IC3AE | 274P121020 | IC | MB88346B |
| IC401 | 272P485010 | IC | LM2902DB [A, B] |
| IC401 | 272P485020 | IC | NJM2902V [E] |
| IC402 | 272P205040 | IC | LM2903DB |
| IC4AA | 263P598010 | IC | MN73033XRA |
| IC4B0 | 272P540010 | IC | VC5035 |
| IC4D0 | 272P542010 | IC | LB1617M-TP-T1 |
| IC4G0 | 272P705010 | IC | LM2904DB |
| IC500 | 263P370010 | IC | LC3564PML-12-TER |
| IC501 | 263P564010 | IC | BU2707K |
| IC502 | 272P673010 | IC | AN2355AP |
| IC503 | 272P447010 | IC | NJM2235M |
| IC504 | 272P366020 | IC | LM311DB |
| IC505 | 274P070010 | IC | SN74HC08DB |
| IC5A0 | 274P060010 | IC | M37405M5-140FP |
| IC5A1 | 263P440010 | IC | S8054HNM-T1 |
| IC5A2 | 272P674010 | IC | M5237ML |
| IC5AA | 274P001010 | IC | M37450M8-470FP |
| IC5AB | 272P705010 | IC | LM2904DB |
| IC5AC | 272P485010 | IC | LM2902DB |
| IC5AE | 272P703010 | IC | LM2901DB |
| IC5D0 | 272P556010 | IC | TA7291F(ER) |
| IC5EA | 263P427010 | IC | S-29181F |
| IC5FA | 272P704010 | IC | TB6503AF |
| IC5GA | 263P596030 | IC | CF79114PM |
| IC5LA | 272P485010 | IC | LM2902DB |
| IC5RA | 272P357010 | IC | RST529C |
| IC5ZA | 272P358020 | IC | TK10501M |
| IC6A1 | 272P748010 | IC | AN2465NFHP |
| IC6AA | 272P485010 | IC | LM2902DB |
| IC6AB | 263P217010 | IC | SC14S66F |
| IC6AC | 263P217010 | IC | SC14S66F |
| IC800 | 274P061010 | IC | M37460M8-087FP |
| IC801 | 263P373010 | IC | S-81350HG-KD-T1 |
| IC802 | 263P375010 | IC | S-80725AL-AN-T1 |
| IC803 | 263P440010 | IC | S8054HNM-T1 |
| IC902 | 272P547010 | IC | MB3782PF-G-BND |

### TRANSISTORS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| Q 200 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 201 | 260P852010 | TRANSISTOR(C) | FMG2/XN1213 |
| Q 202 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 203 | 260P852010 | TRANSISTOR(C) | FMG2/XN1213 |
| Q 205 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 221 | 260P877020 | TRANSISTOR(C) | 2SC4618-P |
| Q 222 | 260P877020 | TRANSISTOR(C) | 2SC4618-P |
| Q 223 | 260P877020 | TRANSISTOR(C) | 2SC4618-P |
| Q 224 | 260P877020 | TRANSISTOR(C) | 2SC4618-P |
| Q 225 | 260P877020 | TRANSISTOR(C) | 2SC4618-P |
| Q 226 | 260P877020 | TRANSISTOR(C) | 2SC4618-P |
| Q 227 | 260P877020 | TRANSISTOR(C) | 2SC4618-P |
| Q 228 | 260P877020 | TRANSISTOR(C) | 2SC4618-P |
| Q 291 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 292 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 294 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 2A1 | 260P852010 | TRANSISTOR(C) | FMG2/XN1213 |
| Q 2A3 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 2A4 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 2A6 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2A9 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 2AA | 260P870010 | TRANSISTOR(C) | 2SA1610Y34 |
| Q 2AB | 260P869010 | TRANSISTOR(C) | 2SC4176B35 |
| Q 2AC | 260P870010 | TRANSISTOR(C) | 2SA1610Y34 |
| Q 2AD | 260P869010 | TRANSISTOR(C) | 2SC4176B35 |
| Q 2AE | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 2AF | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 2AH | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 2AJ | 260P867050 | TRANSISTOR(C) | 2SD1949 |
| Q 2AK | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 2D0 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2D1 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 2D2 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2DA | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 2F0 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2F1 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 2F2 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 2F4 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2F5 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 2H0 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2H2 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 2H3 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2H4 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 2P0 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2P1 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2V0 | 260P861050 | TRANSISTOR(C) | 2SA1577A-Q |
| Q 2V1 | 260P861050 | TRANSISTOR(C) | 2SA1577A-Q |
| Q 2000 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2001 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 2003 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| Q 2004 | 260P855050 | TRANSISTOR(C) | 2SC4081 |
| Q 2005 | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 2006 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 2007 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 2008 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 300 | 260P856010 | TRANSISTOR(C) | DTA144EU |
| Q 301 | 260P844030 | TRANSISTOR(C) | XN1501 |
| Q 320 | 260P867060 | TRANSISTOR(C) | 2SD1949-R |
| Q 321 | 260P861050 | TRANSISTOR(C) | 2SA1577A-Q |
| Q 350 | 260P844010 | TRANSISTOR(C) | FMW1 |
| Q 3A0 | 260P855060 | TRANSISTOR(C) | 2SC4081-S |
| Q 3A1 | 260P855060 | TRANSISTOR(C) | 2SC4081-S |
| Q 3AB | 260P849010 | TRANSISTOR(C) | IMZ1 |
| Q 3AC | 260P849010 | TRANSISTOR(C) | IMZ1 |
| Q 3AD | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 3AE | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 3AF | 260P849010 | TRANSISTOR(C) | IMZ1 |
| Q 3AG | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 3AH | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 3AJ | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 3AK | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 3AL | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 3AM | 260P849010 | TRANSISTOR(C) | IMZ1 |
| Q 3AN | 260P852010 | TRANSISTOR(C) | FMG2/XN1213 |
| Q 3AP | 260P852010 | TRANSISTOR(C) | FMG2/XN1213 |
| Q 3AQ | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 3AR | 260P849030 | TRANSISTOR(C) | XN4601 |
| Q 3AS | 260P863010 | TRANSISTOR(C) | IMT1 |
| Q 3AT | 260P863010 | TRANSISTOR(C) | IMT1 |
| Q 3AU | 260P845010 | TRANSISTOR(C) | IMX1 |
| Q 3AV | 260P845010 | TRANSISTOR(C) | IMX1 |
| Q 3AW | 260P849010 | TRANSISTOR(C) | IMZ1 |
| Q 3AX | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 3AY | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 3AZ | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 3BB | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 3BC | 260P852010 | TRANSISTOR(C) | FMG2/XN1213 |
| Q 3BD | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 3BE | 260P849010 | TRANSISTOR(C) | IMZ1 |
| Q 3BF | 260P845010 | TRANSISTOR(C) | IMX1 |
| Q 3BG | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 3BH | 260P849010 | TRANSISTOR(C) | IMZ1 |
| Q 3BJ | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 3D0 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 404 | 260P851010 | TRANSISTOR(C) | IMD2/XN4312 |
| Q 406 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 407 | 260P859030 | TRANSISTOR(C) | 2SA1576-S |
| Q 500 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 501 | 260P844030 | TRANSISTOR(C) | XN1501 |
| Q 571 | 268P044020 | PHOTO INTERRUPTER | |
| Q 572 | 268P044020 | PHOTO INTERRUPTER | |
| Q 573 | 268P041010 | PHOTO TRANSISTOR | PN147 |
| Q 5A0 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 5A1 | 260P855070 | TRANSISTOR(C) | 2SD1819A-Q |
| Q 5A2 | 260P484020 | TRANSISTOR | 2SB942-P |
| Q 5A3 | 260P858010 | TRANSISTOR(C) | DTA114EU |
| Q 5A4 | 260P855070 | TRANSISTOR(C) | 2SD1819A-Q |
| Q 5AA | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 5AB | 260P858010 | TRANSISTOR(C) | DTA114EU |
| Q 5AC | 260P845010 | TRANSISTOR(C) | IMX1 |
| Q 5AD | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 5AE | 260P853010 | TRANSISTOR(C) | FMA2/XN1113 |
| Q 5AG | 260P852010 | TRANSISTOR(C) | FMG2/XN1213 |
| Q 5D0 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 5FA | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 5FB | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 5FC | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 5FD | 260P854030 | TRANSISTOR(C) | 2SC4098-Q |
| Q 5FG | 260P859050 | TRANSISTOR(C) | 2SA1576-R |
| Q 5FJ | 260P855090 | TRANSISTOR(C) | 2SD1819A-S |
| Q 5FK | 260P855090 | TRANSISTOR(C) | 2SD1819A-S |
| Q 5FL | 260P859090 | TRANSISTOR(C) | 2SB1218A-S |
| Q 5GA | 260P845010 | TRANSISTOR(C) | IMX1 |
| Q 5KM | 260P863010 | TRANSISTOR(C) | IMT1 |
| Q 5LB | 260P855050 | TRANSISTOR(C) | 2SC4081 |
| Q 5LC | 260P858010 | TRANSISTOR(C) | DTA114EU |
| Q 6A1 | 260P852010 | TRANSISTOR(C) | FMG2/XN1213 |
| Q 6A3 | 260P857020 | TRANSISTOR(C) | DTC144EU |
| Q 6A4 | 260P854020 | TRANSISTOR(C) | 2SC4098-P |
| Q 6A5 | 260P856010 | TRANSISTOR(C) | DTA144EU |
| Q 6A6 | 260P849010 | TRANSISTOR(C) | IMZ1 |
| Q 6A7 | 260P849010 | TRANSISTOR(C) | IMZ1 |
| Q 6AA | 260P845010 | TRANSISTOR(C) | IMX1 |
| Q 6AB | 260P855050 | TRANSISTOR(C) | 2SC4081 |
| Q 6AC | 260P856010 | TRANSISTOR(C) | DTA144EU |
| Q 800 | 260P861060 | TRANSISTOR(C) | 2SA1577-R |
| Q 801 | 260P864010 | TRANSISTOR(C) | 2SK209GR |
| Q 802 | 260P857030 | TRANSISTOR(C) | UN5213 |
| Q 904 | 260P701010 | TRANSISTOR(C) | 2SA1213-Y |
| Q 905 | 260P701010 | TRANSISTOR(C) | 2SA1213-Y |
| Q 906 | 260P701010 | TRANSISTOR(C) | 2SA1213-Y |

## DIODES

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| D 201 | 264P841030 | DIODE(C) | MA132WA |
| D 202 | 264P841030 | DIODE(C) | MA132WA |
| D 203 | 264P841030 | DIODE(C) | MA132WA |
| D 204 | 264P841030 | DIODE(C) | MA132WA |
| D 205 | 264P841030 | DIODE(C) | MA132WA |
| D 206 | 264P814030 | DIODE(C) | MA142WA |
| D 207 | 264P814030 | DIODE(C) | MA142WA |
| D 2A0 | 264P828010 | DIODE(C) | DAN202U |
| D 2A1 | 264P814030 | DIODE(C) | MA142WA |
| D 2A2 | 264P814030 | DIODE(C) | MA142WA |
| D 2A3 | 264P843010 | DIODE(C) | DA221/MA133 |
| D 2A4 | 264P843010 | DIODE(C) | DA221/MA133 |
| D 2A5 | 264P828010 | DIODE(C) | DAN202U |
| D 2AA | 264P837010 | DIODE(C) | MA141K |
| D 2AD | 264P837010 | DIODE(C) | MA141K |
| D 2AE | 264P837010 | DIODE(C) | MA141K |
| D 2AF | 264P837010 | DIODE(C) | MA141K |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| D 2AG | 264P837010 | DIODE(C) | MA141K |
| D 2AH | 264P849010 | DIODE(C) | MA728 |
| D 2AJ | 264P848010 | DIODE(C) | MA110 |
| D 2AK | 264P837010 | DIODE(C) | MA141K |
| D 2AL | 264P814030 | DIODE(C) | MA142WA |
| D 2J0 | 264P814030 | DIODE(C) | MA142WA |
| D 2P0 | 264P814030 | DIODE(C) | MA142WA |
| D 2000 | 264P814030 | DIODE(C) | MA142WA |
| D 2001 | 264P844050 | DIODE(C) | RD 7. 5UMB2 |
| D 2002 | 264P844050 | DIODE(C) | RD 7. 5UMB2 |
| D 2003 | 264P844050 | DIODE(C) | RD 7. 5UMB2 |
| D 2004 | 264P844050 | DIODE(C) | RD 7. 5UMB2 |
| D 2005 | 264P814030 | DIODE(C) | MA142WA |
| D 2006 | 264P844050 | DIODE(C) | RD 7. 5UMB2 |
| D 2007 | 264P844050 | DIODE(C) | RD 7. 5UMB2 |
| D 3A0 | 264P814030 | DIODE(C) | MA142WA |
| D 3AB | 264P833010 | DIODE(C) | ND411G-2 |
| D 3MF | 264P833010 | DIODE(C) | ND411G-2 |
| D 500 | 264P845010 | DIODE(C) | 1SV223 |
| D 501 | 264P814030 | DIODE(C) | MA142WA |
| D 571 | 264P526010 | LIGHT EMITTING DIODE | LN57 |
| D 5A0 | 264P828010 | DIODE(C) | DAN202U |
| D 5A1 | 264P814030 | DIODE(C) | MA142WA |
| D 5CA | 264P828010 | DIODE(C) | DAN202U |
| D 5D0 | 264P828010 | DIODE(C) | DAN202U |
| D 5FA | 264P603010 | DIODE(C) | U1GWJ44 |
| D 5FB | 264P603010 | DIODE(C) | U1GWJ44 |
| D 5FC | 264P603010 | DIODE(C) | U1GWJ44 |
| D 5FD | 264P603010 | DIODE(C) | U1GWJ44 |
| D 5FE | 264P814030 | DIODE(C) | MA142WA |
| D 5LA | 264P814030 | DIODE(C) | MA142WA |
| D 6A0 | 264P828010 | DIODE(C) | DAN202U |
| D 6A1 | 264P814030 | DIODE(C) | MA142WA |
| D 6A2 | 264P828010 | DIODE(C) | DAN202U |
| D 6AA | 264P828010 | DIODE(C) | DAN202U |
| D 700 | 264P814030 | DIODE(C) | MA142WA |
| D 701 | 264P814030 | DIODE(C) | MA142WA |
| D 702 | 264P814030 | DIODE(C) | MA142WA |
| D 703 | 264P814030 | DIODE(C) | MA142WA |
| D 800 | 264P847010 | DIODE(C) | MA741WA |
| D 801 | 264P846010 | DIODE(C) | MA732 |
| D 802 | 264P830020 | DIODE(C) | DA204U |
| D 803 | 264P828010 | DIODE(C) | DAN202U |
| D 805 | 264P814030 | DIODE(C) | MA142WA |
| D 806 | 264P814030 | DIODE(C) | MA142WA |
| D 807 | 264P828010 | DIODE(C) | DAN202U |
| D 809 | 264P814030 | DIODE(C) | MA142WA |
| D 903 | 264P814030 | DIODE(C) | MA142WA |
| D 904 | 264P814030 | DIODE(C) | MA142WA |
| D 906 | 264P850010 | DIODE(C) | MA720 |
| D 907 | 264P850010 | DIODE(C) | MA720 |
| D 908 | 264P850010 | DIODE(C) | MA720 |

## FILTERS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| | 499P018010 | OPTICAL FILTER | SF101C4AA | |
| BPF3A0 | 409P620010 | BAND PASS FILTER(C) | RZV-397N | |
| BPF3A1 | 409P621010 | BAND PASS FILTER(C) | RZV-398N | |
| BPF6A1 | 409P552010 | BAND PASS FILTER(C) | H355BSK-2042MYD | |
| CF800 | 299P148010 | CERAMIC RESONATOR | KBR-4. 19MWS | |
| DE2000 | 409P652010 | DELAY EQUALIZER(C) | | |
| FL400 | 299P161010 | FILTER | AFZR72YM38A1 | |
| LF2AA | 409P705010 | LOW PASS FILTER | PYV-812N | |
| LF3AA | 409P708010 | LOW PASS FILTER | RZV-555N | |
| LF3AB | 409P707010 | LOW PASS FILTER | RXV-205N | |
| LF3AC | 409P742010 | LOW PASS FILTER | RXV-720N | |
| LF3AE | 409P706010 | LOW PASS FILTER | RYV-80KN | |
| LF3AF | 409P714010 | LOW PASS FILTER(C) | 4US-TH354LAI5794 | |
| LF3AG | 409P719010 | LOW PASS FILTER(C) | 4FUSTH354LAI5795 | |
| LF3AH | 409P706010 | LOW PASS FILTER | RYV-80KN | |
| LF5AA | 409P733010 | LOW PASS FILTER(C) | 4FUSTH354LAI5592 | |

## DELAY LINES

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| DE2001 | 409P734010 | DELAY EQUALIZER | | |
| DL6A1 | 337P185010 | DELAY LINE | | |

## COILS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| L 200 | 325C147080 | COIL(C) | 180μH-J | |
| L 201 | 325C222050 | COIL(C) | 100μH-J | |
| L 202 | 325C221080 | COIL(C) | 27μH-J | |
| L 203 | 325C222020 | COIL(C) | 56μH-J | |
| L 204 | 325C147050 | COIL(C) | 100μH-J | |
| L 292 | 325C146030 | COIL(C) | 10μH-J | |
| L 293 | 325C146000 | COIL(C) | 5. 6μH-J | |
| L 2A2 | 325C221060 | COIL(C) | 18μH-J | |
| L 2A4 | 325C183010 | COIL(C) | 330μH-M | |
| L 2A5 | 325C222050 | COIL(C) | 100μH-J | |
| L 2AB | 325C141050 | COIL(C) | 15μH-K | |
| L 2AC | 325C240030 | COIL(C) | 1. 5μH-M | |
| L 2AD | 325C141070 | COIL(C) | 22μH-K | |
| L 2AF | 325C241070 | COIL(C) | 22μH-K | |
| L 2D1 | 325C243000 | COIL(C) | 270μH-K | |
| L 2D2 | 325C221070 | COIL(C) | 22μH-J | [A, B] |
| L 2D2 | 325C221090 | COIL(C) | 33μH-J | [E] |
| L 2F0 | 325C221090 | COIL(C) | 33μH-J | |
| L 2F1 | 325C221040 | COIL(C) | 12μH-J | [A, B] |
| L 2F1 | 325C221070 | COIL(C) | 22μH-J | [E] |
| L 2F2 | 325C222000 | COIL(C) | 39μH-J | |
| L 2F3 | 325C221030 | COIL(C) | 10μH-J | |
| L 2H0 | 325C221090 | COIL(C) | 33μH-J | |
| L 2H1 | 325C222020 | COIL(C) | 56μH-J | |
| L 2H2 | 325C221070 | COIL(C) | 22μH-J | |
| L 2K1 | 325C222020 | COIL(C) | 56μH-J | |
| L 2P1 | 325C222050 | COIL(C) | 100μH-J | |
| L 2000 | 325C141060 | COIL(C) | 18μH-K | |
| L 320 | 409P695010 | AUDIO BIAS OSC | | |
| L 321 | 325C242070 | COIL(C) | 150μH-K | |
| L 3A0 | 325C242050 | COIL(C) | 100μH-K | |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| L 3AA | 325C241070 | COIL(C) | 22μH-K |
| L 3AD | 325C241070 | COIL(C) | 22μH-K |
| L 3AE | 325C241070 | COIL(C) | 22μH-K |
| L 3AF | 325C241070 | COIL(C) | 22μH-K |
| L 3AG | 325C241070 | COIL(C) | 22μH-K |
| L 3AH | 325C241030 | COIL(C) | 10μH-K |
| L 3AJ | 325C242020 | COIL(C) | 56μH-K |
| L 3AK | 325C242020 | COIL(C) | 56μH-K |
| L 500 | 325C141030 | COIL(C) | 10μH-K |
| L 501 | 325C141030 | COIL(C) | 10μH-K |
| L 502 | 325C181080 | COIL(C) | 27μH-K |
| L 503 | 325C141010 | COIL(C) | 6. 8μH-M |
| L 5AA | 325C242020 | COIL(C) | 56μH-K |
| L 5AD | 325C242040 | COIL(C) | 82μH-K |
| L 6A0 | 325C242090 | COIL(C) | 220μH-K |
| L 6A1 | 325C221050 | COIL(C) | 15μH-J |
| L 6A3 | 325C146050 | COIL(C) | 15μH-J |
| L 6A4 | 325C141020 | COIL(C) | 8. 2μH-M |
| L 6A5 | 325C147090 | COIL(C) | 220μH-J |
| L 6A6 | 325C147070 | COIL(C) | 150μH-J |
| L 6A7 | 325C147030 | COIL(C) | 68μH-J |
| L 6A8 | 325C147040 | COIL(C) | 82μH-J |
| L 800 | 325C181050 | COIL(C) | 15μH-K |
| L 902 | 351P087010 | CHOKE COIL | CD54 22MHz |
| L 903 | 351P087010 | CHOKE COIL | CD54 22Mz |
| L 904 | 351P088010 | CHOKE COIL | CDR74 150MHz |
| L 905 | 351P088010 | CHOKE COIL | CDR74 150MHz |
| L 906 | 325C242050 | COIL(C) | 100μH-K |
| L 907 | 325C242050 | COIL(C) | 100μH-K |
| L 908 | 351P087020 | CHOKE COIL | CD54 120MHz |

## TRANSFORMERS

| | | | |
|---|---|---|---|
| T 901 | 409P689010 | TRANSFORMER | 0353-105 |

## VARIABLE RESISTORS

| | | | |
|---|---|---|---|
| VR2A0 | 127C261010 | VR-SEMIFIXED(C) | 0. 05W B50K |
| VR2A1 | 127C261010 | VR-SEMIFIXED(C) | 0. 05W B50K |
| VR2AA | 127C221030 | VR-SEMIFIXED(C) | 1/10W B200kΩ-N |
| VR320 | 127C261020 | VR-SEMIFIXED(C) | 0. 05W B100K |
| VR3A0 | 127C260080 | VR-SEMIFIXED(C) | 0. 05W B10K |
| VR3A1 | 127C260060 | VR-SEMIFIXED(C) | 0. 05W B3K |
| VR3AA | 127C220060 | VR-SEMIFIXED(C) | 1/10W B3kΩ-N |
| VR3AB | 127C220070 | VR-SEMIFIXED(C) | 1/10W B5kΩ-N |
| VR3AC | 127C220070 | VR-SEMIFIXED(C) | 1/10W B5kΩ-N |
| VR3AD | 127C220060 | VR-SEMIFIXED(C) | 1/10W B3kΩ-N |
| VR3AE | 127C220090 | VR-SEMIFIXED(C) | 1/10W B20kΩ-N |
| VR3C0 | 127C260080 | VR-SEMIFIXED(C) | 0. 05W B10K |
| VR3C1 | 127C260060 | VR-SEMIFIXED(C) | 0. 05W B3K |
| VR3D0 | 127C260070 | VR-SEMIFIXED(C) | 0. 05W B5K |
| VR5A0 | 127C261020 | VR-SEMIFIXED(C) | 0. 05W B100K |
| VR5A1 | 127C260060 | VR-SEMIFIXED(C) | 0. 05W B3K |
| VR902 | 127C260050 | VR-SEMIFIXED(C) | 0. 05W B2K |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|

## RESISTORS

| | | | | |
|---|---|---|---|---|
| R 200 | 103P502030 | RESISTOR(C) | 1/20W 680Ω-J | |
| R 202 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 203 | 103P704030 | METAL RESISTOR(C) | 1/16W 33kΩ-J | |
| R 204 | 103P704000 | METAL RESISTOR(C) | 1/16W 18kΩ-J | |
| R 205 | 103P702080 | METAL RESISTOR(C) | 1/16W 1. 8kΩ-J | |
| R 206 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 208 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 209 | 103P701070 | METAL RESISTOR(C) | 1/16W 220Ω-J | |
| R 211 | 103P701030 | METAL RESISTOR(C) | 1/16W 100Ω-J | |
| R 212 | 103P702090 | METAL RESISTOR(C) | 1/16W 2. 2kΩ-J | |
| R 213 | 103P508040 | RESISTOR(C) | 1/20W 2. 2Ω-K | |
| R 214 | 103P508040 | RESISTOR(C) | 1/20W 2. 2Ω-K | |
| R 216 | 103P501060 | RESISTOR(C) | 1/20W 180Ω-J | |
| R 217 | 103P700010 | METAL RESISTOR(C) | 1/16W 10Ω-J | |
| R 218 | 103P703070 | METAL RESISTOR(C) | 1/16W 10kΩ-J | |
| R 219 | 103P702000 | METAL RESISTOR(C) | 1/16W 390Ω-J | |
| R 220 | 103P702000 | METAL RESISTOR(C) | 1/16W 390Ω-J | |
| R 221 | 103P501060 | RESISTOR(C) | 1/20W 180Ω-J | |
| R 222 | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J | |
| R 223 | 103P702040 | METAL RESISTOR(C) | 1/16W 820Ω-J | |
| R 224 | 103P500010 | RESISTOR(C) | 1/20W 10Ω-J | |
| R 225 | 103P702000 | METAL RESISTOR(C) | 1/16W 390Ω-J | |
| R 226 | 103P702000 | METAL RESISTOR(C) | 1/16W 390Ω-J | |
| R 227 | 103P501050 | RESISTOR(C) | 1/20W 150Ω-J | |
| R 228 | 103P703000 | METAL RESISTOR(C) | 1/16W 2. 7kΩ-J | |
| R 229 | 103P702000 | METAL RESISTOR(C) | 1/16W 390Ω-J | |
| R 230 | 103P702010 | METAL RESISTOR(C) | 1/16W 470Ω-J | [A, B] |
| R 230 | 103P701080 | METAL RESISTOR(C) | 1/16W 270Ω-J | [E] |
| R 231 | 103P702090 | METAL RESISTOR(C) | 1/16W 2. 2kΩ-J | |
| R 232 | 103P700010 | METAL RESISTOR(C) | 1/16W 10Ω-J | |
| R 233 | 103P703000 | METAL RESISTOR(C) | 1/16W 2. 7kΩ-J | |
| R 234 | 103P702000 | METAL RESISTOR(C) | 1/16W 390Ω-J | |
| R 235 | 103P702090 | METAL RESISTOR(C) | 1/16W 2. 2kΩ-J | |
| R 236 | 103P702010 | METAL RESISTOR(C) | 1/16W 470Ω-J | [A, B] |
| R 236 | 103P701080 | METAL RESISTOR(C) | 1/16W 270Ω-J | [E] |
| R 237 | 103P702010 | METAL RESISTOR(C) | 1/16W 470Ω-J | [A, B] |
| R 237 | 103P701080 | METAL RESISTOR(C) | 1/16W 270Ω-J | [E] |
| R 238 | 103P702000 | METAL RESISTOR(C) | 1/16W 390Ω-J | |
| R 239 | 103P703000 | METAL RESISTOR(C) | 1/16W 2. 7kΩ-J | |
| R 240 | 103P702090 | METAL RESISTOR(C) | 1/16W 2. 2kΩ-J | |
| R 241 | 103P700010 | METAL RESISTOR(C) | 1/16W 10Ω-J | |
| R 242 | 103P700010 | METAL RESISTOR(C) | 1/16W 10Ω-J | |
| R 243 | 103P700010 | METAL RESISTOR(C) | 1/16W 10Ω-J | |
| R 244 | 103P702000 | METAL RESISTOR(C) | 1/16W 390Ω-J | |
| R 245 | 103P703000 | METAL RESISTOR(C) | 1/16W 2. 7kΩ-J | |
| R 246 | 103P702090 | METAL RESISTOR(C) | 1/16W 2. 2kΩ-J | |
| R 247 | 103P702010 | METAL RESISTOR(C) | 1/16W 470Ω-J | [A, B] |
| R 247 | 103P701080 | METAL RESISTOR(C) | 1/16W 270Ω-J | [E] |
| R 248 | 103P702020 | METAL RESISTOR(C) | 1/16W 560Ω-J | |
| R 249 | 103P703040 | METAL RESISTOR(C) | 1/16W 5. 6kΩ-J | |
| R 250 | 103P702070 | METAL RESISTOR(C) | 1/16W 1. 5kΩ-J | |
| R 251 | 103P508040 | RESISTOR(C) | 1/20W 2. 2Ω-K | |
| R 252 | 103P508040 | RESISTOR(C) | 1/20W 2. 2Ω-K | |
| R 253 | 103P508040 | RESISTOR(C) | 1/20W 2. 2Ω-K | |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 254 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 255 | 103P701070 | METAL RESISTOR(C) | 1/16W 220Ω-J |
| R 256 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 257 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 258 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 259 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 275 | 103P703040 | METAL RESISTOR(C) | 1/16W 5.6kΩ-J |
| R 279 | 103P702040 | METAL RESISTOR(C) | 1/16W 820Ω-J |
| R 289 | 103P501010 | RESISTOR(C) | 1/20W 68Ω-J |
| R 290 | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 291 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 292 | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 293 | 103P501060 | RESISTOR(C) | 1/20W 180Ω-J |
| R 294 | 103P501090 | RESISTOR(C) | 1/20W 330Ω-J |
| R 295 | 103P501010 | RESISTOR(C) | 1/20W 68Ω-J |
| R 296 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 297 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 298 | 103P504070 | RESISTOR(C) | 1/20W 68kΩ-J |
| R 2A6 | 103P703070 | METAL RESISTOR(C) | 1/16W 10kΩ-J |
| R 2A7 | 103P505000 | RESISTOR(C) | 1/20W 120kΩ-J |
| R 2A9 | 103P704020 | METAL RESISTOR(C) | 1/16W 27kΩ-J |
| R 2AA | 103P493080 | METAL RESISTOR(C) | 1/16W 3.6 K-F |
| R 2AB | 103P495080 | METAL RESISTOR(C) | 1/16W 24K-F |
| R 2AC | 103P506010 | RESISTOR(C) | 1/20W 1MΩ-J |
| R 2AD | 103P502010 | RESISTOR(C) | 1/20W 470Ω-J |
| R 2AE | 103P502010 | RESISTOR(C) | 1/20W 470Ω-J |
| R 2AF | 103P402050 | RESISTOR(C) | 1/10W 1kΩ-J |
| R 2AG | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 2AH | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 2AJ | 103P506010 | RESISTOR(C) | 1/20W 1MΩ-J |
| R 2AK | 103P502000 | RESISTOR(C) | 1/20W 390Ω-J |
| R 2AL | 103P501040 | RESISTOR(C) | 1/20W 120Ω-J |
| R 2AM | 103P501040 | RESISTOR(C) | 1/20W 120Ω-J |
| R 2AN | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 2AQ | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 2AR | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 2AS | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 2AT | 103P502040 | RESISTOR(C) | 1/20W 820Ω-J |
| R 2AV | 103P502010 | RESISTOR(C) | 1/20W 470Ω-J |
| R 2B1 | 103P492050 | METAL RESISTOR(C) | 1/16W 1.0kΩ-F |
| R 2B2 | 103P493070 | METAL RESISTOR(C) | 1/16W 3.3kΩ-F |
| R 2B3 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 2B4 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 2B5 | 103P493050 | METAL RESISTOR(C) | 1/16W 2.7kΩ-F |
| R 2B6 | 103P492010 | METAL RESISTOR(C) | 1/16W 680Ω-F |
| R 2B7 | 103P702010 | METAL RESISTOR(C) | 1/16W 470Ω-J |
| R 2B8 | 103P701030 | METAL RESISTOR(C) | 1/16W 100Ω-J |
| R 2B9 | 103P503040 | RESISTOR(C) | 1/20W 5.6kΩ-J |
| R 2BA | 103P501010 | RESISTOR(C) | 1/20W 68Ω-J |
| R 2BB | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 2BC | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 2BD | 103P503040 | RESISTOR(C) | 1/20W 5.6kΩ-J |
| R 2BE | 103P500010 | RESISTOR(C) | 1/20W 10Ω-J |
| R 2BF | 103P500090 | RESISTOR(C) | 1/20W 47Ω-J |
| R 2BG | 103P509050 | RESISTOR(C) | 0Ω RM1608 |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| R 2BJ | 103P506010 | RESISTOR(C) | 1/20W 1MΩ-J | |
| R 2BK | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J | |
| R 2BL | 103P504070 | RESISTOR(C) | 1/20W 68kΩ-J | |
| R 2BM | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J | |
| R 2BN | 103P501060 | RESISTOR(C) | 1/20W 180Ω-J | |
| R 2C0 | 103P704000 | METAL RESISTOR(C) | 1/16W 18kΩ-J | |
| R 2C1 | 103P509050 | RESISTOR(C) | 0Ω RM1608 | |
| R 2C3 | 103P704010 | METAL RESISTOR(C) | 1/16W 22kΩ-J | |
| R 2C4 | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J | |
| R 2C5 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2C6 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2C7 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2C8 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2CA | 103P509050 | RESISTOR(C) | 0Ω RM1608 | |
| R 2CB | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J | |
| R 2CC | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J | |
| R 2CD | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J | |
| R 2CE | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J | |
| R 2CF | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J | |
| R 2CG | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J | |
| R 2D0 | 103P703000 | METAL RESISTOR(C) | 1/16W 2.7kΩ-J | |
| R 2D1 | 103P701030 | METAL RESISTOR(C) | 1/16W 100Ω-J | |
| R 2D2 | 103P702010 | METAL RESISTOR(C) | 1/16W 470Ω-J | |
| R 2D3 | 103P702020 | METAL RESISTOR(C) | 1/16W 560Ω-J | |
| R 2D4 | 103P702040 | METAL RESISTOR(C) | 1/16W 820Ω-J | |
| R 2D5 | 103P704030 | METAL RESISTOR(C) | 1/16W 33kΩ-J | |
| R 2D6 | 103P704000 | METAL RESISTOR(C) | 1/16W 18kΩ-J | |
| R 2D7 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2D8 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2DA | 103P503040 | RESISTOR(C) | 1/20W 5.6kΩ-J | |
| R 2DB | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J | |
| R 2DC | 103P509050 | RESISTOR(C) | 0Ω RM1608 | |
| R 2DF | 103P500040 | METAL RESISTOR(C) | 1/16W 18Ω-J | |
| R 2DG | 103P500040 | METAL RESISTOR(C) | 1/16W 18Ω-J | |
| R 2DH | 103P501090 | RESISTOR(C) | 1/20W 330Ω-J | |
| R 2E0 | 103P702060 | METAL RESISTOR(C) | 1/16W 1.2kΩ-J | |
| R 2E1 | 103P702090 | METAL RESISTOR(C) | 1/16W 2.2kΩ-J | |
| R 2E2 | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J | |
| R 2E3 | 103P701030 | METAL RESISTOR(C) | 1/16W 100Ω-J | |
| R 2E4 | 103P701030 | METAL RESISTOR(C) | 1/16W 100Ω-J | |
| R 2E5 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J | |
| R 2E6 | 103P706010 | METAL RESISTOR(C) | 1/16W 1MΩ-J | |
| R 2E7 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2EA | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J | |
| R 2EB | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J | |
| R 2F0 | 103P703030 | METAL RESISTOR(C) | 1/16W 4.7kΩ-J | |
| R 2F1 | 103P703020 | METAL RESISTOR(C) | 1/16W 3.9kΩ-J | |
| R 2F2 | 103P702070 | METAL RESISTOR(C) | 1/16W 1.5kΩ-J | |
| R 2F3 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2F4 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2F5 | 103P702040 | METAL RESISTOR(C) | 1/16W 820Ω-J | [A, B] |
| R 2F5 | 103P703020 | METAL RESISTOR(C) | 1/16W 3.9kΩ-J | [E] |
| R 2F7 | 103P702020 | METAL RESISTOR(C) | 1/16W 560Ω-J | |
| R 2F8 | 103P702020 | METAL RESISTOR(C) | 1/16W 560Ω-J | |
| R 2F9 | 103P702070 | METAL RESISTOR(C) | 1/16W 1.5kΩ-J | |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| R 2G0 | 103P709050 | METAL RESISTOR(C) | 1/16W 0Ω | |
| R 2G1 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2G2 | 103P702080 | METAL RESISTOR(C) | 1/16W 1.8kΩ-J | |
| R 2G3 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2G4 | 103P704060 | METAL RESISTOR(C) | 1/16W 56kΩ-J | |
| R 2G5 | 103P704060 | METAL RESISTOR(C) | 1/16W 56kΩ-J | |
| R 2G6 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2H0 | 103P703030 | METAL RESISTOR(C) | 1/16W 4.7kΩ-J | |
| R 2H1 | 103P703020 | METAL RESISTOR(C) | 1/16W 3.9kΩ-J | |
| R 2H2 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2H3 | 103P702020 | METAL RESISTOR(C) | 1/16W 560Ω-J | |
| R 2H4 | 103P702080 | METAL RESISTOR(C) | 1/16W 1.8kΩ-J | |
| R 2H6 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2H7 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2H8 | 103P702090 | METAL RESISTOR(C) | 1/16W 2.2kΩ-J | |
| R 2H9 | 103P702040 | METAL RESISTOR(C) | 1/16W 820Ω-J | |
| R 2J0 | 103P493070 | METAL RESISTOR(C) | 1/16W 3.3kΩ-F | |
| R 2J1 | 103P493070 | METAL RESISTOR(C) | 1/16W 3.3kΩ-F | |
| R 2J2 | 103P491070 | METAL RESISTOR(C) | 1/16W 470Ω-F | |
| R 2J3 | 103P492090 | RESISTOR(C) | 1/16W 1.5kΩ-F | |
| R 2J4 | 103P492050 | METAL RESISTOR(C) | 1/16W 1.0kΩ-F | |
| R 2J5 | 103P492050 | METAL RESISTOR(C) | 1/16W 1.0kΩ-F | |
| R 2J6 | 103P493000 | METAL RESISTOR(C) | 1/16W 1.6kΩ-F | |
| R 2J7 | 103P701050 | METAL RESISTOR(C) | 1/16W 150Ω-J | |
| R 2J8 | 103P702070 | METAL RESISTOR(C) | 1/16W 1.5kΩ-J | |
| R 2J9 | 103P701090 | METAL RESISTOR(C) | 1/16W 330Ω-J | |
| R 2K0 | 103P703010 | METAL RESISTOR(C) | 1/16W 3.3kΩ-J | |
| R 2K1 | 103P703010 | METAL RESISTOR(C) | 1/16W 3.3kΩ-J | |
| R 2K2 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2K3 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2K4 | 103P502070 | RESISTOR(C) | 1/20W 1.5kΩ-J | [A, B] |
| R 2K4 | 103P502060 | RESISTOR(C) | 1/20W 1.2kΩ-J | [E] |
| R 2L0 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2P0 | 103P502070 | RESISTOR(C) | 1/20W 1.5kΩ-J | |
| R 2P1 | 103P493020 | METAL RESISTOR(C) | 1/16W 2kΩ-F | |
| R 2P2 | 103P491080 | METAL RESISTOR(C) | 1/16W 510Ω-F | |
| R 2P3 | 103P702050 | METAL RESISTOR(C) | 1/16W 1kΩ-J | |
| R 2P4 | 103P701030 | METAL RESISTOR(C) | 1/16W 100Ω-J | |
| R 2P5 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2P6 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2P7 | 103P504070 | RESISTOR(C) | 1/20W 68kΩ-J | |
| R 2P8 | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J | |
| R 2R0 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2R1 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2V0 | 103P702080 | METAL RESISTOR(C) | 1/16W 1.8kΩ-J | |
| R 2V1 | 103P703030 | METAL RESISTOR(C) | 1/16W 4.7kΩ-J | |
| R 2V2 | 103P702080 | METAL RESISTOR(C) | 1/16W 1.8kΩ-J | |
| R 2V3 | 103P703030 | METAL RESISTOR(C) | 1/16W 4.7kΩ-J | |
| R 2000 | 103P494070 | METAL RESISTOR(C) | 1/16W 8.2kΩ-F | |
| R 2001 | 103P493090 | METAL RESISTOR(C) | 1/16W 3.9kΩ-F | |
| R 2002 | 103P509090 | RESISTOR(C) | 1/20W 75Ω-J | |
| R 2003 | 103P491070 | METAL RESISTOR(C) | 1/16W 470Ω-F | |
| R 2004 | 103P491050 | METAL RESISTOR(C) | 1/16W 390Ω-F | |
| R 2005 | 103P509090 | RESISTOR(C) | 1/20W 75Ω-J | |
| R 2006 | 103P509090 | RESISTOR(C) | 1/20W 75Ω-J | |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| R 2007 | 103P502030 | RESISTOR(C) | 1/20W 680Ω-J | |
| R 2008 | 103P502030 | RESISTOR(C) | 1/20W 680Ω-J | |
| R 2009 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2010 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 2011 | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J | |
| R 2012 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J | |
| R 2013 | 103P495030 | METAL RESISTOR(C) | 1/16W 15kΩ-F | |
| R 2014 | 103P492050 | METAL RESISTOR(C) | 1/16W 1.0kΩ-F | |
| R 2017 | 103P502030 | RESISTOR(C) | 1/20W 680Ω-J | |
| R 2018 | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J | |
| R 2019 | 103P491030 | METAL RESISTOR(C) | 1/16W 330Ω-F | |
| R 2020 | 109P117010 | FUSE | 0.025-M(3.15A) | |
| R 2021 | 103P491010 | METAL RESISTOR(C) | 1/16W 270Ω-F | |
| R 2022 | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J | |
| R 2023 | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J | |
| R 2024 | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J | |
| R 2025 | 103P503040 | RESISTOR(C) | 1/20W 5.6kΩ-J | |
| R 2026 | 103P492060 | METAL RESISTOR(C) | 1/16W 1.1kΩ-F | |
| R 2027 | 103P492050 | METAL RESISTOR(C) | 1/16W 1.0kΩ-F | |
| R 2028 | 103P503080 | RESISTOR(C) | 1/20W 12kΩ-J | |
| R 2029 | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J | |
| R 2031 | 103P494090 | METAL RESISTOR(C) | 1/16W 10kΩ-F | |
| R 2032 | 103P494070 | METAL RESISTOR(C) | 1/16W 8.2kΩ-F | [A, |
| R 2033 | 103P493090 | METAL RESISTOR(C) | 1/16W 3.9kΩ-F | [A, |
| R 300 | 103P702090 | METAL RESISTOR(C) | 1/16W 2.2kΩ-J | |
| R 301 | 103P703030 | METAL RESISTOR(C) | 1/16W 4.7kΩ-J | |
| R 302 | 103P704000 | METAL RESISTOR(C) | 1/16W 18kΩ-J | |
| R 303 | 103P702010 | METAL RESISTOR(C) | 1/16W 470Ω-J | |
| R 304 | 103P703050 | METAL RESISTOR(C) | 1/16W 6.8kΩ-J | |
| R 308 | 103P500010 | RESISTOR(C) | 1/20W 10Ω-J | |
| R 309 | 103P704010 | METAL RESISTOR(C) | 1/16W 22kΩ-J | |
| R 310 | 103P701040 | METAL RESISTOR(C) | 1/16W 120Ω-J | |
| R 311 | 103P705000 | METAL RESISTOR(C) | 1/16W 120kΩ-J | |
| R 312 | 103P703040 | METAL RESISTOR(C) | 1/16W 5.6kΩ-J | |
| R 313 | 103P703010 | METAL RESISTOR(C) | 1/16W 3.3kΩ-J | |
| R 314 | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J | |
| R 315 | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J | |
| R 316 | 103P705000 | METAL RESISTOR(C) | 1/16W 120kΩ-J | |
| R 317 | 103P705000 | METAL RESISTOR(C) | 1/16W 120kΩ-J | |
| R 318 | 103P503020 | RESISTOR(C) | 1/20W 3.9kΩ-J | |
| R 320 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 321 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K | |
| R 322 | 103P703050 | METAL RESISTOR(C) | 1/16W 6.8kΩ-J | |
| R 323 | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J | |
| R 324 | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J | |
| R 325 | 103P502000 | RESISTOR(C) | 1/20W 390Ω-J | |
| R 350 | 103P702090 | METAL RESISTOR(C) | 1/16W 2.2kΩ-J | |
| R 351 | 103P702090 | METAL RESISTOR(C) | 1/16W 2.2kΩ-J | |
| R 354 | 103P703060 | METAL RESISTOR(C) | 1/16W 8.2kΩ-J | |
| R 355 | 103P703060 | METAL RESISTOR(C) | 1/16W 8.2kΩ-J | |
| R 356 | 103P704050 | METAL RESISTOR(C) | 1/16W 47kΩ-J | |
| R 357 | 103P704050 | METAL RESISTOR(C) | 1/16W 47kΩ-J | |
| R 358 | 103P704050 | METAL RESISTOR(C) | 1/16W 47kΩ-J | |
| R 359 | 103P704050 | METAL RESISTOR(C) | 1/16W 47kΩ-J | |
| R 360 | 103P703020 | METAL RESISTOR(C) | 1/16W 3.9kΩ-J | |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 361 | 103P703020 | METAL RESISTOR(C) | 1/16W 3.9kΩ-J |
| R 362 | 103P501020 | RESISTOR(C) | 1/20W 82Ω-J |
| R 363 | 103P501020 | RESISTOR(C) | 1/20W 82Ω-J |
| R 364 | 103P706040 | METAL RESISTOR(C) | 1/16W 1.8MΩ-J |
| R 365 | 103P701020 | METAL RESISTOR(C) | 1/16W 82Ω-J |
| R 366 | 103P502010 | RESISTOR(C) | 1/20W 470Ω-J |
| R 367 | 103P703070 | METAL RESISTOR(C) | 1/16W 10kΩ-J |
| R 368 | 103P703070 | METAL RESISTOR(C) | 1/16W 10kΩ-J |
| R 3A0 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3A1 | 103P493040 | METAL RESISTOR(C) | 1/16W 2.4Ω-F |
| R 3A2 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 3A3 | 103P703030 | METAL RESISTOR(C) | 1/16W 4.7kΩ-J |
| R 3A4 | 103P704010 | METAL RESISTOR(C) | 1/16W 22kΩ-J |
| R 3A5 | 103P704050 | METAL RESISTOR(C) | 1/16W 47kΩ-J |
| R 3A6 | 103P702040 | METAL RESISTOR(C) | 1/16W 820Ω-J |
| R 3A7 | 103P702090 | METAL RESISTOR(C) | 1/16W 2.2kΩ-J |
| R 3AA | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 3AC | 103P503020 | RESISTOR(C) | 1/20W 3.9kΩ-J |
| R 3AD | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 3AF | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 3AH | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 3AJ | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3AK | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 3AL | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 3AM | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 3AN | 103P504040 | RESISTOR(C) | 1/20W 39kΩ-J |
| R 3AP | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 3AQ | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 3AR | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 3AS | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 3AT | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 3AU | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 3AW | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 3AX | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 3AY | 103P505000 | RESISTOR(C) | 1/20W 120kΩ-J |
| R 3B0 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 3BB | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3BC | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 3BD | 103P503080 | RESISTOR(C) | 1/20W 12kΩ-J |
| R 3BE | 103P494060 | METAL RESISTOR(C) | 1/16W 7.5kΩ-F |
| R 3BF | 103P504000 | RESISTOR(C) | 1/20W 18kΩ-J |
| R 3BG | 103P506010 | RESISTOR(C) | 1/20W 1MΩ-J |
| R 3BH | 103P505080 | RESISTOR(C) | 1/20W 560kΩ-J |
| R 3BJ | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 3BK | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3BL | 103P504070 | RESISTOR(C) | 1/20W 68kΩ-J |
| R 3BN | 103P504000 | RESISTOR(C) | 1/20W 18kΩ-J |
| R 3BP | 103P502010 | RESISTOR(C) | 1/20W 470Ω-J |
| R 3BQ | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 3BR | 103P494030 | METAL RESISTOR(C) | 1/16W 5.6kΩ-F |
| R 3BS | 103P495070 | METAL RESISTOR(C) | 1/16W 22kΩ-F |
| R 3BT | 103P495070 | METAL RESISTOR(C) | 1/16W 22kΩ-F |
| R 3BU | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 3BV | 103P502070 | RESISTOR(C) | 1/20W 1.5kΩ-J |
| R 3BW | 103P502070 | RESISTOR(C) | 1/20W 1.5kΩ-J |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 3BX | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 3BY | 103P502060 | RESISTOR(C) | 1/20W 1.2kΩ-J |
| R 3C0 | 103P495030 | METAL RESISTOR(C) | 1/16W 15kΩ-F |
| R 3C1 | 103P493040 | METAL RESISTOR(C) | 1/16W 2.4Ω-F |
| R 3C2 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 3C3 | 103P703030 | METAL RESISTOR(C) | 1/16W 4.7kΩ-J |
| R 3C4 | 103P704010 | METAL RESISTOR(C) | 1/16W 22kΩ-J |
| R 3C5 | 103P704050 | METAL RESISTOR(C) | 1/16W 47kΩ-J |
| R 3C6 | 103P702040 | METAL RESISTOR(C) | 1/16W 820Ω-J |
| R 3C7 | 103P702090 | METAL RESISTOR(C) | 1/16W 2.2kΩ-J |
| R 3CA | 103P504060 | RESISTOR(C) | 1/20W 56kΩ-J |
| R 3CB | 103P503050 | RESISTOR(C) | 1/20W 6.8kΩ-J |
| R 3CC | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3CD | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J |
| R 3CF | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3CG | 103P505040 | RESISTOR(C) | 1/20W 270kΩ-J |
| R 3CH | 103P493080 | METAL RESISTOR(C) | 1/16W 3.6kΩ-F |
| R 3CJ | 103P502070 | RESISTOR(C) | 1/20W 1.5kΩ-J [A, B] |
| R 3CJ | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J [E] |
| R 3CK | 103P504080 | RESISTOR(C) | 1/20W 82kΩ-J |
| R 3CL | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 3CM | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 3CN | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J |
| R 3CQ | 103P501050 | RESISTOR(C) | 1/20W 150Ω-J |
| R 3CR | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 3CS | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 3CT | 103P503080 | RESISTOR(C) | 1/20W 12kΩ-J |
| R 3CU | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 3CW | 103P505000 | RESISTOR(C) | 1/20W 120kΩ-J |
| R 3CX | 103P492040 | RESISTOR(C) | 1/16W 910Ω-F |
| R 3CY | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 3CZ | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 3D0 | 103P703010 | METAL RESISTOR(C) | 1/16W 3.3kΩ-J |
| R 3D1 | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J |
| R 3D2 | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 3D3 | 103P702070 | METAL RESISTOR(C) | 1/16W 1.5kΩ-J |
| R 3D4 | 103P701050 | METAL RESISTOR(C) | 1/16W 150Ω-J |
| R 3D5 | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 3D6 | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 3D7 | 103P702060 | METAL RESISTOR(C) | 1/16W 1.2kΩ-J |
| R 3D8 | 103P703050 | METAL RESISTOR(C) | 1/16W 6.8kΩ-J |
| R 3DA | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 3DB | 103P494090 | METAL RESISTOR(C) | 1/16W 10kΩ-F |
| R 3DD | 103P494090 | METAL RESISTOR(C) | 1/16W 10kΩ-F |
| R 3DE | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 3DF | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 3DG | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3DH | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 3DJ | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 3DK | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 3DL | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3DM | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 3DN | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 3DP | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 3DQ | 103P494070 | METAL RESISTOR(C) | 1/16W 8.2kΩ-F |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 3DR | 103P494090 | METAL RESISTOR(C) | 1/16W 10kΩ-F |
| R 3DS | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 3DT | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 3DU | 103P504000 | RESISTOR(C) | 1/20W 18kΩ-J |
| R 3DV | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 3DW | 103P505040 | RESISTOR(C) | 1/20W 270kΩ-J |
| R 3DX | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 3DY | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 3DZ | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 3EA | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J |
| R 3EB | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J |
| R 3EC | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 3ED | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 3EE | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 3EF | 103P496030 | RESISTOR(C) | 1/16W 39kΩ-F |
| R 3EG | 103P495000 | METAL RESISTOR(C) | 1/16W 11kΩ-F |
| R 3EH | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 3EK | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J |
| R 3EL | 103P494090 | METAL RESISTOR(C) | 1/16W 10kΩ-F |
| R 3EM | 103P493080 | METAL RESISTOR(C) | 1/16W 3.6kΩ-F |
| R 3EQ | 103P502070 | RESISTOR(C) | 1/20W 1.5kΩ-J |
| R 3ER | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 3EU | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3EV | 103P503020 | RESISTOR(C) | 1/20W 3.9kΩ-J |
| R 3EW | 103P503020 | RESISTOR(C) | 1/20W 3.9kΩ-J |
| R 3EX | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 3EY | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 3EZ | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 3FA | 103P490070 | METAL RESISTOR(C) | 1/16W 180Ω-F |
| R 3FB | 103P493010 | METAL RESISTOR(C) | 1/16W 1.8kΩ-F |
| R 3FC | 103P493010 | METAL RESISTOR(C) | 1/16W 1.8kΩ-F |
| R 3FD | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3FE | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 3FF | 103P502060 | RESISTOR(C) | 1/20W 1.2kΩ-J |
| R 3FG | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 3FH | 103P503020 | RESISTOR(C) | 1/20W 3.9kΩ-J |
| R 3FJ | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 3FK | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 3FL | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J [E] |
| R 3FM | 103P502070 | RESISTOR(C) | 1/20W 1.5kΩ-J |
| R 3FN | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 3FP | 103P493020 | METAL RESISTOR(C) | 1/16W 2kΩ-F |
| R 3FQ | 103P502070 | RESISTOR(C) | 1/20W 1.5kΩ-J |
| R 3FR | 103P503020 | RESISTOR(C) | 1/20W 3.9kΩ-J |
| R 3FS | 103P502030 | RESISTOR(C) | 1/20W 680Ω-J |
| R 3FT | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 3FU | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 3FW | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J [A, B] |
| R 3FW | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J [E] |
| R 3FX | 103P504040 | RESISTOR(C) | 1/20W 39kΩ-J |
| R 3FY | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 3FZ | 103P505010 | RESISTOR(C) | 1/20W 150kΩ-J |
| R 3GE | 103P496030 | RESISTOR(C) | 1/16W 39kΩ-F |
| R 3GF | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3GG | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 3GH | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 3GJ | 103P492050 | METAL RESISTOR(C) | 1/16W 1.0kΩ-F |
| R 3GK | 103P492050 | METAL RESISTOR(C) | 1/16W 1.0kΩ-F |
| R 3GL | 103P496030 | RESISTOR(C) | 1/16W 39kΩ-F |
| R 3GM | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 3GN | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 3GP | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3GQ | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3GR | 103P503080 | RESISTOR(C) | 1/20W 12kΩ-J |
| R 3GU | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 3GV | 103P502010 | RESISTOR(C) | 1/20W 470Ω-J |
| R 3GW | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 3GX | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 3GY | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 3GZ | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 3HA | 103P502060 | RESISTOR(C) | 1/20W 1.2kΩ-J |
| R 3HB | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J |
| R 3HC | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 3HD | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 3HE | 103P504000 | RESISTOR(C) | 1/20W 18kΩ-J |
| R 3HF | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 3HJ | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 3HK | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 3HL | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 3HM | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 3HN | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 3HR | 103P502030 | RESISTOR(C) | 1/20W 680Ω-J |
| R 3HS | 103P505090 | RESISTOR(C) | 1/20W 680kΩ-J |
| R 3HT | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 3MF | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 3VA | 103P502030 | RESISTOR(C) | 1/20W 680Ω-J |
| R 400 | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 401 | 103P504070 | RESISTOR(C) | 1/20W 68kΩ-J |
| R 402 | 103P505010 | RESISTOR(C) | 1/20W 150kΩ-J |
| R 403 | 103P505050 | RESISTOR(C) | 1/20W 330kΩ-J |
| R 404 | 103P505010 | RESISTOR(C) | 1/20W 150kΩ-J |
| R 405 | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 406 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 407 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 408 | 103P505010 | RESISTOR(C) | 1/20W 150kΩ-J |
| R 409 | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J |
| R 410 | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 411 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 412 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 414 | 103P495020 | METAL RESISTOR(C) | 1/16W 13kΩ-F |
| R 415 | 103P495010 | METAL RESISTOR(C) | 1/16W 12kΩ-F |
| R 418 | 103P498020 | METAL RESISTOR(C) | 1/16W 240kΩ-F |
| R 421 | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 422 | 103P503040 | RESISTOR(C) | 1/20W 5.6kΩ-J |
| R 423 | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 424 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 425 | 103P505020 | RESISTOR(C) | 1/20W 180kΩ-J |
| R 426 | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J |
| R 427 | 103P705080 | METAL RESISTOR(C) | 1/16W 560kΩ-J |
| R 431 | 103P503040 | RESISTOR(C) | 1/20W 5.6kΩ-J |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 432 | 103P503040 | RESISTOR(C) | 1/20W 5.6kΩ-J |
| R 433 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 434 | 103P506010 | RESISTOR(C) | 1/20W 1MΩ-J |
| R 435 | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 439 | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 443 | 103P494090 | METAL RESISTOR(C) | 1/16W 10kΩ-F |
| R 444 | 103P494090 | METAL RESISTOR(C) | 1/16W 10kΩ-F |
| R 4AA | 103P494010 | METAL RESISTOR(C) | 1/16W 4.7kΩ-F |
| R 4B0 | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 4B1 | 103P505040 | RESISTOR(C) | 1/20W 270kΩ-J |
| R 4B2 | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J |
| R 4B3 | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 4B4 | 103P497010 | METAL RESISTOR(C) | 1/16W 82kΩ-F |
| R 4B5 | 103P496030 | RESISTOR(C) | 1/16W 39kΩ-F |
| R 4B6 | 103P495000 | METAL RESISTOR(C) | 1/16W 11kΩ-F |
| R 4B7 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 4B8 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 4B9 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 4BF | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 4C0 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 4C1 | 103P501050 | RESISTOR(C) | 1/20W 150Ω-J |
| R 4C2 | 103P508050 | RESISTOR(C) | 1/16W 2.7Ω-K |
| R 4C3 | 103P508050 | RESISTOR(C) | 1/16W 2.7Ω-K |
| R 4C4 | 103P508050 | RESISTOR(C) | 1/16W 2.7Ω-K |
| R 4C5 | 103P508050 | RESISTOR(C) | 1/16W 2.7Ω-K |
| R 4C6 | 103P501060 | RESISTOR(C) | 1/20W 180Ω-J |
| R 4C7 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 4C8 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 4CP | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 4D0 | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J |
| R 4D1 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 4D2 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 4D3 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 4D4 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 4D6 | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 4G0 | 103P496050 | METAL RESISTOR(C) | 1/16W 47kΩ-F |
| R 4G1 | 103P496050 | METAL RESISTOR(C) | 1/16W 47kΩ-F |
| R 4G2 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 4G3 | 103P504060 | RESISTOR(C) | 1/20W 56kΩ-J |
| R 4G4 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 4G5 | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J |
| R 4G6 | 103P505040 | RESISTOR(C) | 1/20W 270kΩ-J |
| R 4G7 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 4G8 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 4JH | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 4JP | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 500 | 103P703070 | METAL RESISTOR(C) | 1/16W 10kΩ-J |
| R 501 | 103P702070 | METAL RESISTOR(C) | 1/16W 1.5kΩ-J |
| R 502 | 103P703070 | METAL RESISTOR(C) | 1/16W 10kΩ-J |
| R 503 | 103P505000 | RESISTOR(C) | 1/20W 120kΩ-J |
| R 504 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 505 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 506 | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J |
| R 507 | 103P495040 | METAL RESISTOR(C) | 1/16W 16kΩ-F |
| R 508 | 103P495030 | METAL RESISTOR(C) | 1/16W 15kΩ-F |
| R 509 | 103P495020 | METAL RESISTOR(C) | 1/16W 13kΩ-F |
| R 510 | 103P495050 | METAL RESISTOR(C) | 1/16W 18kΩ-F |
| R 511 | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 512 | 103P503040 | RESISTOR(C) | 1/20W 5.6kΩ-J |
| R 513 | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 514 | 103P501080 | RESISTOR(C) | 1/20W 270Ω-J |
| R 515 | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 516 | 103P503000 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 517 | 103P503050 | RESISTOR(C) | 1/20W 6.8kΩ-J |
| R 518 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 519 | 103P504060 | RESISTOR(C) | 1/20W 56kΩ-J |
| R 520 | 103P503040 | RESISTOR(C) | 1/20W 5.6kΩ-J |
| R 521 | 103P505000 | RESISTOR(C) | 1/20W 120kΩ-J |
| R 522 | 103P495010 | METAL RESISTOR(C) | 1/16W 12kΩ-F |
| R 523 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 524 | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J |
| R 528 | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 571 | 103P352020 | RESISTOR(C) | 1/8W 560Ω-J |
| R 572 | 103P359050 | RESISTOR(C) | 1/8W 0Ω |
| R 5A1 | 103P501020 | RESISTOR(C) | 1/20W 82Ω-J |
| R 5A2 | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 5A3 | 103P497030 | METAL RESISTOR(C) | 1/16W 100kΩ-F |
| R 5A4 | 103P498070 | METAL RESISTOR(C) | 1/16W 390kΩ-F |
| R 5A5 | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 5A6 | 103P502080 | RESISTOR(C) | 1/20W 2.7kΩ-J |
| R 5A7 | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 5A8 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5A9 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5AA | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5AB | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5AC | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 5AD | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 5AE | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 5AF | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 5AG | 103P500070 | RESISTOR(C) | 1/20W 33Ω-J |
| R 5AH | 103P494000 | METAL RESISTOR(C) | 1/16W 4.3kΩ-F |
| R 5AJ | 103P501040 | RESISTOR(C) | 1/20W 120Ω-J |
| R 5AL | 103P495040 | METAL RESISTOR(C) | 1/16W 16kΩ-F |
| R 5AM | 103P495040 | METAL RESISTOR(C) | 1/16W 16kΩ-F |
| R 5AP | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 5AQ | 103P504060 | RESISTOR(C) | 1/20W 56kΩ-J |
| R 5AR | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 5AS | 103P504000 | RESISTOR(C) | 1/20W 18kΩ-J |
| R 5AT | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 5AU | 103P504070 | RESISTOR(C) | 1/20W 68kΩ-J |
| R 5AV | 103P504070 | RESISTOR(C) | 1/20W 68kΩ-J |
| R 5AW | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 5AX | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 5AY | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5B1 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 5B2 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 5B3 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 5B4 | 103P504000 | RESISTOR(C) | 1/20W 18kΩ-J |
| R 5B5 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 5B6 | 103P506010 | RESISTOR(C) | 1/20W 1MΩ-J |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 5B7 | 103P504000 | RESISTOR(C) | 1/20W 18kΩ-J |
| R 5B8 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 5BA | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5BB | 103P504060 | RESISTOR(C) | 1/20W 56kΩ-J |
| R 5BC | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 5BD | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5BE | 103P504060 | RESISTOR(C) | 1/20W 56kΩ-J |
| R 5BF | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 5BG | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5BH | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5BK | 103P496030 | RESISTOR(C) | 1/16W 39kΩ-F |
| R 5C1 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5C2 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5C4 | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J |
| R 5CB | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 5D0 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5D1 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5D2 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5D3 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5E0 | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 5E1 | 103P503080 | RESISTOR(C) | 1/20W 12kΩ-J |
| R 5E2 | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J |
| R 5E3 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5E4 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5EA | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5ED | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 5EF | 103P503020 | RESISTOR(C) | 1/20W 3.9kΩ-J |
| R 5FA | 103P503020 | RESISTOR(C) | 1/20W 3.9kΩ-J |
| R 5FB | 103P494020 | METAL RESISTOR(C) | 1/16W 5.1kΩ-F |
| R 5FC | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5FD | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 5FE | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 5FF | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5FG | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 5FH | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 5FJ | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5FK | 103P501090 | RESISTOR(C) | 1/20W 330Ω-J |
| R 5FL | 103P502030 | RESISTOR(C) | 1/20W 680Ω-J |
| R 5FN | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5FQ | 103P494020 | METAL RESISTOR(C) | 1/16W 5.1kΩ-F |
| R 5FS | 103P503050 | RESISTOR(C) | 1/20W 6.8kΩ-J |
| R 5FT | 103P503050 | RESISTOR(C) | 1/20W 6.8kΩ-J |
| R 5FU | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 5FV | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 5FW | 103P502020 | RESISTOR(C) | 1/20W 560Ω-J |
| R 5FX | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 5FY | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5FZ | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5GA | 103P493020 | METAL RESISTOR(C) | 1/16W 2kΩ-F |
| R 5GB | 103P492080 | RESISTOR(C) | 1/16W 1.3kΩ-F |
| R 5GC | 103P492080 | RESISTOR(C) | 1/16W 1.3kΩ-F |
| R 5GD | 103P501070 | RESISTOR(C) | 1/20W 220Ω-J |
| R 5GE | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 5JH | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 5JP | 103P509050 | RESISTOR(C) | 0Ω RM1608 |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 5JQ | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 5KE | 103P502010 | RESISTOR(C) | 1/20W 470Ω-J |
| R 5KL | 103P501020 | RESISTOR(C) | 1/20W 82Ω-J |
| R 5KM | 103P509010 | METAL RESISTOR(C) | 1/16W 8.2Ω-K |
| R 5LC | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 5LD | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 5LE | 103P505050 | RESISTOR(C) | 1/20W 330kΩ-J |
| R 5LF | 103P505020 | RESISTOR(C) | 1/20W 180kΩ-J |
| R 5LG | 103P492010 | METAL RESISTOR(C) | 1/16W 680Ω-F |
| R 5LH | 103P495070 | METAL RESISTOR(C) | 1/16W 22kΩ-F |
| R 5LJ | 103P494070 | METAL RESISTOR(C) | 1/16W 8.2kΩ-F |
| R 5LK | 103P506050 | RESISTOR(C) | 1/20W 2.2MΩ-J |
| R 5LL | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 5LM | 103P504060 | RESISTOR(C) | 1/20W 56kΩ-J |
| R 5LN | 103P402000 | RESISTOR(C) | 1/10W 390Ω-J |
| R 5LP | 103P491080 | METAL RESISTOR(C) | 1/16W 510Ω-F |
| R 5LQ | 103P492090 | RESISTOR(C) | 1/16W 1.5kΩ-F |
| R 5LR | 103P495010 | METAL RESISTOR(C) | 1/16W 12kΩ-F |
| R 5LS | 103P497060 | METAL RESISTOR(C) | 1/16W 130kΩ-F |
| R 5LT | 103P498040 | METAL RESISTOR(C) | 1/16W 300kΩ-F |
| R 5LU | 103P497050 | METAL RESISTOR(C) | 1/16W 120kΩ-F |
| R 5LV | 103P493070 | METAL RESISTOR(C) | 1/16W 3.3kΩ-F |
| R 5LW | 103P495070 | METAL RESISTOR(C) | 1/16W 22kΩ-F |
| R 5LX | 103P494090 | METAL RESISTOR(C) | 1/16W 10kΩ-F |
| R 5LY | 103P495010 | METAL RESISTOR(C) | 1/16W 12kΩ-F |
| R 5LZ | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 5MA | 103P508090 | METAL RESISTOR(C) | 1/16W 5.6Ω-K |
| R 5MB | 103P508090 | METAL RESISTOR(C) | 1/16W 5.6Ω-K |
| R 5MJ | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 5MK | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 5RA | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 5US | 103P409050 | RESISTOR(C) | 1/10W 0Ω |
| R 5ZA | 103P493090 | METAL RESISTOR(C) | 1/16W 3.9kΩ-F |
| R 5ZB | 103P492050 | METAL RESISTOR(C) | 1/16W 1.0kΩ-F |
| R 5ZC | 103P495000 | METAL RESISTOR(C) | 1/16W 11kΩ-F |
| R 6A0 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 6A1 | 103P502060 | RESISTOR(C) | 1/20W 1.2kΩ-J |
| R 6A2 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 6A3 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 6A4 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 6A5 | 103P502060 | RESISTOR(C) | 1/20W 1.2kΩ-J |
| R 6A6 | 103P501080 | RESISTOR(C) | 1/20W 270Ω-J |
| R 6A8 | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 6A9 | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 6AA | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 6AC | 103P505090 | RESISTOR(C) | 1/20W 680kΩ-J |
| R 6AF | 103P505090 | RESISTOR(C) | 1/20W 680kΩ-J |
| R 6AH | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 6AJ | 103P505090 | RESISTOR(C) | 1/20W 680kΩ-J |
| R 6AM | 103P505090 | RESISTOR(C) | 1/20W 680kΩ-J |
| R 6AN | 103P494090 | METAL RESISTOR(C) | 1/16W 10kΩ-F |
| R 6AP | 103P495040 | METAL RESISTOR(C) | 1/16W 16kΩ-F |
| R 6AQ | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 6AR | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 6AS | 103P500070 | RESISTOR(C) | 1/20W 33Ω-J |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 6AT | 103P500070 | RESISTOR(C) | 1/20W 33Ω-J |
| R 6AU | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 6AV | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 6AW | 103P505090 | RESISTOR(C) | 1/20W 680kΩ-J |
| R 6B6 | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 6B8 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 6B9 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 6BA | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 6BB | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 6C1 | 103P506050 | RESISTOR(C) | 1/20W 2.2MΩ-J |
| R 6C2 | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 6C4 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 6C5 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 6C6 | 103P502070 | RESISTOR(C) | 1/20W 1.5kΩ-J |
| R 6C7 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 6C9 | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 6D0 | 103P505010 | RESISTOR(C) | 1/20W 150kΩ-J |
| R 6D2 | 103P509050 | RESISTOR(C) | 0Ω RM1608 |
| R 6D3 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 6D4 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 6D5 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 6D6 | 103P508040 | RESISTOR(C) | 1/20W 2.2Ω-K |
| R 6D7 | 103P504030 | RESISTOR(C) | 1/20W 33kΩ-J |
| R 6D8 | 103P504060 | RESISTOR(C) | 1/20W 56kΩ-J |
| R 6D9 | 103P503050 | RESISTOR(C) | 1/20W 6.8kΩ-J [E] |
| R 6D9 | 103P703050 | METAL RESISTOR(C) | 1/16W 6.8kΩ-J [A, B] |
| R 6E0 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 6E1 | 103P509050 | RESISTOR(C) | 0Ω RM1608 [E] |
| R 6E2 | 103P509050 | RESISTOR(C) | 0Ω RM1608 [E] |
| R 6E3 | 103P504010 | RESISTOR(C) | 1/20W 22kΩ-J |
| R 6E4 | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 6E5 | 103P504000 | RESISTOR(C) | 1/20W 18kΩ-J |
| R 6E6 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 6E7 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 6F0 | 103P701030 | METAL RESISTOR(C) | 1/16W 100Ω-J [A, B] |
| R 6F1 | 103P703030 | METAL RESISTOR(C) | 1/16W 4.7kΩ-J |
| R 6F4 | 103P501030 | RESISTOR(C) | 1/20W 100Ω-J |
| R 6F5 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 6F6 | 103P493030 | METAL RESISTOR(C) | 1/16W 2.2kΩ-F [A, B] |
| R 6F8 | 103P703070 | METAL RESISTOR(C) | 1/16W 10kΩ-J [A, B] |
| R 6F9 | 103P493030 | METAL RESISTOR(C) | 1/16W 2.2kΩ-F [A, B] |
| R 6R3 | 103P504060 | RESISTOR(C) | 1/20W 56kΩ-J |
| R 6ZA | 103P505070 | RESISTOR(C) | 1/20W 470kΩ-J |
| R 6ZB | 103P505070 | RESISTOR(C) | 1/20W 470kΩ-J |
| R 6ZC | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 6ZD | 103P496080 | METAL RESISTOR(C) | 1/16W 62kΩ-F |
| R 6ZE | 103P496080 | METAL RESISTOR(C) | 1/16W 62kΩ-F |
| R 6ZF | 103P496000 | METAL RESISTOR(C) | 1/16W 30kΩ-F |
| R 6ZG | 103P505070 | RESISTOR(C) | 1/20W 470kΩ-J |
| R 6ZH | 103P505070 | RESISTOR(C) | 1/20W 470kΩ-J |
| R 6ZJ | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 6ZK | 103P496080 | METAL RESISTOR(C) | 1/16W 62kΩ-F |
| R 6ZL | 103P496080 | METAL RESISTOR(C) | 1/16W 62kΩ-F |
| R 6ZM | 103P496000 | METAL RESISTOR(C) | 1/16W 30kΩ-F |
| R 800 | 103P504020 | RESISTOR(C) | 1/20W 27kΩ-J |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| R 801 | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 802 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 803 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 804 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 805 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 806 | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 807 | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 808 | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 809 | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 810 | 103P505030 | RESISTOR(C) | 1/20W 220kΩ-J |
| R 812 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 813 | 103P502060 | RESISTOR(C) | 1/20W 1.2kΩ-J |
| R 814 | 103P506050 | RESISTOR(C) | 1/20W 2.2MΩ-J |
| R 815 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 817 | 103P506010 | RESISTOR(C) | 1/20W 1MΩ-J |
| R 818 | 103P504050 | RESISTOR(C) | 1/20W 47kΩ-J |
| R 820 | 103P527030 | METAL RESISTOR(C) | 1/10W 100kΩ-D |
| R 822 | 103P527030 | METAL RESISTOR(C) | 1/10W 100kΩ-D |
| R 824 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 825 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 829 | 103P503060 | RESISTOR(C) | 1/20W 8.2kΩ-J |
| R 833 | 103P504090 | RESISTOR(C) | 1/20W 100kΩ-J |
| R 840 | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 841 | 103P506070 | RESISTOR(C) | 1/16W 3.3MΩ-K |
| R 842 | 103P506070 | RESISTOR(C) | 1/16W 3.3MΩ-K |
| R 843 | 103P506070 | RESISTOR(C) | 1/16W 3.3MΩ-K |
| R 852 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 853 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 854 | 103P502050 | RESISTOR(C) | 1/20W 1kΩ-J |
| R 855 | 103P503030 | RESISTOR(C) | 1/20W 4.7kΩ-J |
| R 856 | 103P502090 | RESISTOR(C) | 1/20W 2.2kΩ-J |
| R 860 | 103P703030 | METAL RESISTOR(C) | 1/16W 4.7kΩ-J |
| R 906 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 907 | 103P503010 | RESISTOR(C) | 1/20W 3.3kΩ-J |
| R 908 | 103P505090 | RESISTOR(C) | 1/20W 680kΩ-J |
| R 909 | 103P505010 | RESISTOR(C) | 1/20W 150kΩ-J |
| R 910 | 103P505060 | RESISTOR(C) | 1/16W 390kΩ-J |
| R 911 | 103P496030 | RESISTOR(C) | 1/16W 39kΩ-F |
| R 912 | 103P495050 | METAL RESISTOR(C) | 1/16W 18kΩ-F |
| R 913 | 103P503090 | RESISTOR(C) | 1/20W 15kΩ-J |
| R 914 | 103P503070 | RESISTOR(C) | 1/20W 10kΩ-J |
| R 915 | 103P502000 | RESISTOR(C) | 1/20W 390Ω-J |
| R 916 | 103P402010 | RESISTOR(C) | 1/10W 470Ω-J |
| R 917 | 103P502000 | RESISTOR(C) | 1/20W 390Ω-J |
| R 918 | 103P402010 | RESISTOR(C) | 1/10W 470Ω-J |
| R 919 | 103P501050 | RESISTOR(C) | 1/20W 150Ω-J |
| R 920 | 103P481070 | METAL RESISTOR(C) | 1/4W 220Ω-J |
| R 921 | 103P496010 | METAL RESISTOR(C) | 1/16W 33kΩ-F |
| R 922 | 103P494010 | METAL RESISTOR(C) | 1/16W 4.7kΩ-F |
| R 923 | 103P500090 | RESISTOR(C) | 1/20W 47Ω-J |

## CAPACITORS AND TRIMMERS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| C 200 | 154P355000 | CAPACITOR(C) | SL50V 390pF-J |
| C 201 | 154P354020 | CAPACITOR(C) | SL50V 180pF-J |
| C 202 | 154P353080 | CAPACITOR(C) | SL50V 100pF-J |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| C 203 | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 204 | 154P351060 | CAPACITOR(C) | SL50V 15pF-J |
| C 205 | 141P141070 | CAPACITOR(C) | B50V 4700pF-K |
| C 207 | 154P354000 | CAPACITOR(C) | SL50V 150pF-J |
| C 208 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 209 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 211 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 212 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 213 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 214 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 215 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 216 | 154P355040 | CAPACITOR(C) | SL25V 560pF-J |
| C 217 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 218 | 154P355040 | CAPACITOR(C) | SL25V 560pF-J |
| C 219 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 220 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 221 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 222 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 223 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 224 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 225 | 154P355060 | CAPACITOR(C) | SL25V 680pF-J |
| C 226 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 227 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 228 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 229 | 154P355060 | CAPACITOR(C) | SL25V 680pF-J |
| C 230 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 231 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 232 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 233 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 234 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 235 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 236 | 154P352040 | CAPACITOR(C) | SL50V 33pF-J [A, B] |
| C 236 | 154P353000 | CAPACITOR(C) | SL50V 56pF-J [E] |
| C 237 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 238 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 239 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 240 | 154P352020 | CAPACITOR(C) | SL50V 27pF-J [A, B] |
| C 240 | 154P353000 | CAPACITOR(C) | SL50V 56pF-J [E] |
| C 241 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 242 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 243 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 244 | 154P352040 | CAPACITOR(C) | SL50V 33pF-J [A, B] |
| C 244 | 154P353000 | CAPACITOR(C) | SL50V 56pF-J [E] |
| C 245 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 246 | 154P352040 | CAPACITOR(C) | SL50V 33pF-J [A, B] |
| C 246 | 154P353000 | CAPACITOR(C) | SL50V 56pF-J [E] |
| C 247 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 248 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 249 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 250 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 254 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 255 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 256 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 257 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 258 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| C 259 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 260 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 261 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 262 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 263 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 268 | 154P354040 | CAPACITOR(C) | SL50V 220pF-J |
| C 278 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 280 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 281 | 141P141080 | CAPACITOR(C) | B50V 5600pF-K |
| C 282 | 141P141070 | CAPACITOR(C) | B50V 4700pF-K |
| C 283 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 284 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 285 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 286 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 289 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 291 | 154P352040 | CAPACITOR(C) | SL50V 33pF-J |
| C 292 | 154P353060 | CAPACITOR(C) | SL50V 100pF-J |
| C 293 | 154P353060 | CAPACITOR(C) | SL50V 100pF-J |
| C 294 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 295 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 297 | 154P342030 | CAPACITOR(C) | CH50V 33pF-J |
| C 298 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 299 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 2A0 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 2A1 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 2A2 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 2A3 | 141P135080 | CAPACITOR(C) | F25V0.1μF-Z |
| C 2A4 | 141P143090 | CAPACITOR(C) | F50V 0.022μF-ZZ |
| C 2A5 | 154P342030 | CAPACITOR(C) | CH50V 33pF-J |
| C 2A6 | 154P344050 | CAPACITOR(C) | CH25V 270pF-J |
| C 2A7 | 181P509020 | CAPACITOR(C) | 04W35V 2.2μF-M |
| C 2A8 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 2AA | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 2AB | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 2AC | 181P509000 | CAPACITOR(C) | 04W 25V 4.7μF-M |
| C 2AD | 181P502040 | CAPACITOR(C) | 04W 16V 22μF-M |
| C 2AE | 181P508080 | CAPACITOR(C) | 04W 16V 10μF-M |
| C 2AF | 189P123070 | CAPACITOR(C) | 16V 10μF-M |
| C 2AG | 154P340080 | CAPACITOR(C) | CH50V 7pF-C |
| C 2AH | 154P340060 | CAPACITOR(C) | CH50V 5pF-C |
| C 2AL | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 2AM | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 2AN | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 2AP | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 2AQ | 154P341050 | CAPACITOR(C) | CH50V 15pF-J |
| C 2AU | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 2AV | 154P341090 | CAPACITOR(C) | CH50V 22pF-J |
| C 2B0 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 2B1 | 154P342070 | CAPACITOR(C) | CH50V 47pF-J |
| C 2B2 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 2B4 | 154P334070 | CAPACITOR(C) | CH50V 330pF-J |
| C 2B5 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 2B6 | 141P136040 | CAPACITOR(C) | F16V 2.2μF-Z |
| C 2B7 | 181P509080 | CAPACITOR(C) | 04W 50V 1μF-M |
| C 2B8 | 181P508070 | CAPACITOR(C) | 04W 16V 4.7μF-M |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| C 2B9 | 141P136040 | CAPACITOR(C) | F16V 2.2μF-Z | |
| C 2BB | 154P341070 | CAPACITOR(C) | CH50V 18pF-J | |
| C 2BC | 154P342030 | CAPACITOR(C) | CH50V 33pF-J | |
| C 2BD | 141P133080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2BE | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2BF | 154P341070 | CAPACITOR(C) | CH50V 18pF-J | |
| C 2BG | 154P342050 | CAPACITOR(C) | CH50V 39pF-J | |
| C 2BH | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2BJ | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M | |
| C 2BK | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2BL | 141P135070 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2BM | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2BN | 141P135070 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2BQ | 141P135010 | CAPACITOR(C) | F25V 0.33μF-Z | |
| C 2BR | 181P509090 | CAPACITOR(C) | 04W 50V 2.2μF-M | |
| C 2BS | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z | |
| C 2BU | 141P135070 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2BV | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M | |
| C 2C0 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K | |
| C 2C1 | 181P509090 | CAPACITOR(C) | 04W 50V 2.2μF-M | |
| C 2C2 | 181P509030 | CAPACITOR(C) | 04W 35V 3.3μF-M | |
| C 2C3 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M | |
| C 2C5 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z | |
| C 2C7 | 154P342010 | CAPACITOR(C) | CH50V 27pF-J | |
| C 2C9 | 154P354020 | CAPACITOR(C) | SL50V 180pF-J | |
| C 2CB | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2D0 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2D1 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2D2 | 154P354040 | CAPACITOR(C) | SL50V 220pF-J | |
| C 2D3 | 154P351000 | CAPACITOR(C) | SL50V 8pF-C | [A, B] |
| C 2D3 | 154P352020 | CAPACITOR(C) | SL50V 27pF-J | [E] |
| C 2D4 | 154P352000 | CAPACITOR(C) | SL50V 22pF-J | [A, B] |
| C 2D4 | 154P350080 | CAPACITOR(C) | SL50V 6pF-C | [E] |
| C 2D5 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2DA | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2DB | 181P508070 | CAPACITOR(C) | 04W 16V 4.7μF-M | |
| C 2DC | 141P134010 | CAPACITOR(C) | F50V 0.047μF-Z | |
| C 2DD | 141P134010 | CAPACITOR(C) | F50V 0.047μF-Z | |
| C 2E0 | 154P351060 | CAPACITOR(C) | SL50V 15pF-J | |
| C 2F0 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2F1 | 154P351000 | CAPACITOR(C) | SL50V 8pF-C | |
| C 2F2 | 154P352040 | CAPACITOR(C) | SL50V 33pF-J | [A, B] |
| C 2F2 | 154P352020 | CAPACITOR(C) | SL50V 27pF-J | [E] |
| C 2F3 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2F4 | 154P351080 | CAPACITOR(C) | SL50V 18pF-J | [A, B] |
| C 2F4 | 154P352000 | CAPACITOR(C) | SL50V 22pF-J | [E] |
| C 2F5 | 154P351040 | CAPACITOR(C) | SL50V 12pF-C | |
| C 2F6 | 154P340070 | CAPACITOR(C) | CH50V 6pF-C | |
| C 2H0 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2H1 | 154P353040 | CAPACITOR(C) | SL50V 82pF-J | |
| C 2H2 | 154P352060 | CAPACITOR(C) | SL50V 39pF-J | |
| C 2H3 | 154P351080 | CAPACITOR(C) | SL50V 18pF-J | |
| C 2H4 | 154P351060 | CAPACITOR(C) | SL50V 15pF-J | |
| C 2J0 | 189P122010 | CAPACITOR(C) | 10V 2.2μF-M | |
| C 2J1 | 189P122010 | CAPACITOR(C) | 10V 2.2μF-M | |
| C 2J2 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M | |
| C 2J3 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2J4 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2J5 | 154P348040 | CAPACITOR(C) | CH50V 150pF-G | |
| C 2J6 | 154P348040 | CAPACITOR(C) | CH50V 150pF-G | |
| C 2J7 | 154P348040 | CAPACITOR(C) | CH50V 150pF-G | |
| C 2J8 | 154P348040 | CAPACITOR(C) | CH50V 150pF-G | |
| C 2J9 | 154P348060 | CAPACITOR(C) | CH50V 220pF-G | |
| C 2K0 | 154P348010 | CAPACITOR(C) | CH50V 82pF-G | |
| C 2K1 | 154P348070 | CAPACITOR(C) | CH25V 270pF-G | |
| C 2K2 | 154P344010 | CAPACITOR(C) | CH50V 180pF-J | |
| C 2K3 | 154P342070 | CAPACITOR(C) | CH50V 47pF-J | |
| C 2K4 | 154P343090 | CAPACITOR(C) | CH50V 150pF-J | |
| C 2K5 | 154P343090 | CAPACITOR(C) | CH50V 150pF-J | |
| C 2K6 | 154P344050 | CAPACITOR(C) | CH25V 270pF-J | |
| C 2K7 | 181P508070 | CAPACITOR(C) | 04W 16V 4.7μF-M | |
| C 2K8 | 154P354040 | CAPACITOR(C) | SL50V 220pF-J | |
| C 2K9 | 154P351060 | CAPACITOR(C) | SL50V 15pF-J | [A, B] |
| C 2K9 | 154P352020 | CAPACITOR(C) | SL50V 27pF-J | [E] |
| C 2P0 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2P1 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2P2 | 154P341090 | CAPACITOR(C) | CH50V 22pF-J | |
| C 2P3 | 154P343030 | CAPACITOR(C) | CH50V 82pF-J | |
| C 2P4 | 181P509020 | CAPACITOR(C) | 04W 35V 2.2μF-M | |
| C 2P5 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2P6 | 181P509080 | CAPACITOR(C) | 04W 50V1μF-M | |
| C 2P7 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2R0 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2R1 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2R2 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z | |
| C 2V0 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2V1 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2000 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2001 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2002 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2003 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2004 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2006 | 181P508010 | CAPACITOR(C) | 04W 4V 220μF-M | |
| C 2007 | 181P509080 | CAPACITOR(C) | 04W 50V 1μF-M | |
| C 2009 | 181P508010 | CAPACITOR(C) | 04W 4V 220μF-M | |
| C 2010 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M | |
| C 2011 | 181P512020 | CAPACITOR(C) | 04W 16V 4.7μF-M | |
| C 2012 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z | |
| C 2013 | 181P508070 | CAPACITOR(C) | 04W 16V 4.7μF-M | |
| C 2015 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z | |
| C 2016 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M | |
| C 300 | 189P120050 | CAPACITOR(C) | 4V 22μF-M | |
| C 301 | 181P510070 | CAPACITOR(C) | 04W 10V 10μF-M BP | |
| C 302 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z | |
| C 305 | 154P354040 | CAPACITOR(C) | SL50V 220pF-J | |
| C 306 | 189P125010 | C-TANTALUM(C) | 25V 0.47μF-M | |
| C 307 | 154P355060 | CAPACITOR(C) | SL25V 680pF-J | |
| C 308 | 154P327000 | CAPACITOR(C) | SL50V 2700pF-J | |
| C 309 | 189P120050 | CAPACITOR(C) | 4V 22μF-M | |
| C 310 | 141P132030 | CAPACITOR(C) | B50V 0.015μF-K | |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| C 311 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 312 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 313 | 189P122010 | CAPACITOR(C) | 10V 2.2μF-M |
| C 314 | 189P122010 | CAPACITOR(C) | 10V 2.2μF-M |
| C 320 | 141P141040 | CAPACITOR(C) | B50V 2700pF-K |
| C 321 | 141P137080 | CAPACITOR(C) | B25V 0.047μF-K |
| C 323 | 154P354040 | CAPACITOR(C) | SL50V 220pF-J |
| C 324 | 189P096020 | C-PLASTIC-PP | 100V 3300pF-J |
| C 325 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 352 | 181P509030 | CAPACITOR(C) | 04W 35V 3.3μF-M |
| C 353 | 181P509030 | CAPACITOR(C) | 04W 35V 3.3μF-M |
| C 354 | 172P312070 | CAPACITOR(C) | 25V 0.15μF-J |
| C 355 | 172P312070 | CAPACITOR(C) | 25V 0.15μF-J |
| C 356 | 172P312070 | CAPACITOR(C) | 25V 0.15μF-J |
| C 357 | 172P312070 | CAPACITOR(C) | 25V 0.15μF-J |
| C 358 | 154P353060 | CAPACITOR(C) | SL50V 100pF-J |
| C 359 | 154P353060 | CAPACITOR(C) | SL50V 100pF-J |
| C 360 | 181P507080 | CAPACITOR(C) | 4V 33μF-M |
| C 361 | 181P507080 | CAPACITOR(C) | 4V 33μF-M |
| C 362 | 181P508070 | CAPACITOR(C) | 04W 16V 4.7μF-M |
| C 363 | 181P500040 | CAPACITOR(C) | 6.3V 100μF-M |
| C 364 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 3A0 | 189P120050 | CAPACITOR(C) | 4V 22μF-M |
| C 3A1 | 154P326080 | CAPACITOR(C) | SL50V 2200pF-J |
| C 3A2 | 189P120030 | C-TANTALUM(C) | 4V 10μF-M |
| C 3A3 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 3A4 | 189P122010 | CAPACITOR(C) | 10V 2.2μF-M |
| C 3A5 | 181P507080 | CAPACITOR(C) | 4V 33μF-M |
| C 3A6 | 141P136040 | CAPACITOR(C) | F16V 2.2μF-Z |
| C 3A7 | 172P341030 | CAPACITOR(C) | 16V 0.01μF-J |
| C 3A8 | 141P138060 | CAPACITOR(C) | B25V 0.22μF-K |
| C 3A9 | 141P136040 | CAPACITOR(C) | F16V 2.2μF-Z |
| C 3AA | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AB | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 3AC | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3AD | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 3AE | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AF | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AG | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AH | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AJ | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AK | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AL | 189P121050 | CAPACITOR(C) | 6.3V 15μF-M |
| C 3AM | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AN | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3AP | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AR | 181P512020 | CAPACITOR(C) | 04W 16V 4.7μF-M |
| C 3AS | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AT | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AU | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AW | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3AX | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3AY | 189P122010 | CAPACITOR(C) | 10V 2.2μF-M |
| C 3AZ | 154P343050 | CAPACITOR(C) | CH50V 100pF-J |
| C 3B0 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| C 3B1 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 3B2 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 3B3 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 3B5 | 141P134020 | CAPACITOR(C) | F50V 0.1μF-Z |
| C 3BA | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3BB | 189P122010 | CAPACITOR(C) | 10V 2.2μF-M |
| C 3BC | 189P123010 | CAPACITOR(C) | 16V 1μF-M |
| C 3BD | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3BE | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3BF | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3BG | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 3BH | 181P508080 | CAPACITOR(C) | 04W 16V 10μF-M |
| C 3BL | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 3BM | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3BN | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 3BP | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3BQ | 189P121020 | CAPACITOR(C) | 6.3V 4.7μF-M |
| C 3BR | 189P121020 | CAPACITOR(C) | 6.3V 4.7μF-M |
| C 3BS | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3BT | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3BU | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 3BV | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3C0 | 189P120050 | CAPACITOR(C) | 4V 22μF-M |
| C 3C1 | 154P326080 | CAPACITOR(C) | SL50V 2200pF-J |
| C 3C2 | 189P120030 | C-TANTALUM(C) | 4V 10μF-M |
| C 3C3 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 3C4 | 189P122010 | CAPACITOR(C) | 10V 2.2μF-M |
| C 3C5 | 181P507080 | CAPACITOR(C) | 4V 33μF-M |
| C 3C6 | 141P136040 | CAPACITOR(C) | F16V 2.2μF-Z |
| C 3C7 | 172P341030 | CAPACITOR(C) | 16V 0.01μF-J |
| C 3C8 | 141P138060 | CAPACITOR(C) | B25V 0.22μF-K |
| C 3C9 | 141P136040 | CAPACITOR(C) | F16V 2.2μF-Z |
| C 3CA | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 3CB | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 3CC | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3CE | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3CF | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3CG | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 3CH | 154P342070 | CAPACITOR(C) | CH50V 47pF-J |
| C 3CJ | 154P342070 | CAPACITOR(C) | CH50V 47pF-J |
| C 3CK | 154P341050 | CAPACITOR(C) | CH50V 15pF-J |
| C 3CL | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3CM | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 3CN | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 3CP | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3CQ | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 3CR | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3CS | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3CT | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3D0 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3D1 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3D2 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 3D3 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 3D4 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3D5 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| C 3D6 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3D7 | 154P354040 | CAPACITOR(C) | SL50V 220pF-J |
| C 3D8 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3D9 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3DA | 181P509000 | CAPACITOR(C) | 04W 25V 4.7μF-M |
| C 3DB | 141P144000 | CAPACITOR(C) | F25V 0.033μF-Z |
| C 3DC | 154P341010 | CAPACITOR(C) | CH50V 10pF-C |
| C 3DD | 154P343050 | CAPACITOR(C) | CH50V 100pF-J |
| C 3DE | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 3DF | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3DG | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 3DJ | 141P140010 | CAPACITOR(C) | B50V 220pF-K |
| C 3DL | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 3EC | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 3VA | 154P341010 | CAPACITOR(C) | CH50V 10pF-C |
| C 401 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 402 | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 403 | 141P132030 | CAPACITOR(C) | B50V 0.015μF-K |
| C 404 | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 405 | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 407 | 181P500030 | CAPACITOR(C) | 6.3V 47μF-M |
| C 408 | 181P500030 | CAPACITOR(C) | 6.3V 47μF-M |
| C 409 | 141P137080 | CAPACITOR(C) | B25V 0.047μF-K |
| C 410 | 141P138050 | CAPACITOR(C) | B25V 0.18μF-K |
| C 412 | 181P508080 | CAPACITOR(C) | 04W 16V 10μF-M |
| C 413 | 141P140020 | CAPACITOR(C) | B50V 270pF-K |
| C 414 | 181P508080 | CAPACITOR(C) | 04W 16V 10μF-M |
| C 415 | 141P139010 | CAPACITOR(C) | B25V 0.068μF-K |
| C 418 | 189P122010 | CAPACITOR(C) | 10V 2.2μF-M |
| C 419 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 420 | 141P141050 | CAPACITOR(C) | B50V 3300pF-K |
| C 4AA | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 4AB | 154P343050 | CAPACITOR(C) | CH50V 100pF-J |
| C 4B0 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 4B1 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 4B2 | 189P123010 | CAPACITOR(C) | 16V 1μF-M |
| C 4B3 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 4B4 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 4B5 | 181P509000 | CAPACITOR(C) | 04W 25V 4.7μF-M |
| C 4B6 | 181P509000 | CAPACITOR(C) | 04W 25V 4.7μF-M |
| C 4B7 | 181P509000 | CAPACITOR(C) | 04W 25V 4.7μF-M |
| C 4B8 | 154P343050 | CAPACITOR(C) | CH50V 100pF-J |
| C 4C0 | 141P134010 | CAPACITOR(C) | F50V 0.047μF-Z |
| C 4C1 | 154P355080 | CAPACITOR(C) | SL25V 820pF-J |
| C 4C2 | 181P509090 | CAPACITOR(C) | 04W 50V 2.2μF-M |
| C 4C3 | 141P141050 | CAPACITOR(C) | B50V 3300pF-K |
| C 4C4 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 4D0 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 4D1 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 4D2 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 4D3 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 4D4 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 4D5 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 4G0 | 141P139000 | CAPACITOR(C) | B25V 0.056μF-K |
| C 4G1 | 141P132010 | CAPACITOR(C) | B50V 0.01μF-K |
| C 4G2 | 154P352000 | CAPACITOR(C) | SL50V 22pF-J |
| C 4G3 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 500 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 501 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 502 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 503 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 505 | 154P343010 | CAPACITOR(C) | CH50V 68pF-J |
| C 506 | 141P142040 | CAPACITOR(C) | B25V/16V 0.018μF-K |
| C 507 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 508 | 141P142070 | CAPACITOR(C) | B25V/16V 0.033μF-K |
| C 509 | 154P341030 | CAPACITOR(C) | CH50V 12pF-J |
| C 510 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 511 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 512 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 513 | 181P508080 | CAPACITOR(C) | 04W 16V 10μF-M |
| C 514 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 515 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 516 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 517 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 518 | 181P508080 | CAPACITOR(C) | 04W 16V 10μF-M |
| C 519 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 520 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 521 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 522 | 154P341030 | CAPACITOR(C) | CH50V 12pF-J |
| C 523 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 524 | 154P344010 | CAPACITOR(C) | CH50V 180pF-J |
| C 525 | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 5A2 | 172P341090 | CAPACITOR(C) | 16V 0.033μF-J |
| C 5A3 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 5A4 | 154P341030 | CAPACITOR(C) | CH50V 12pF-J |
| C 5A5 | 154P341070 | CAPACITOR(C) | CH50V 18pF-J |
| C 5A6 | 141P137060 | CAPACITOR(C) | B50V 0.033μF-K |
| C 5A8 | 181P502060 | CAPACITOR(C) | 16V 47μF-M |
| C 5AA | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 5AB | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5AC | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5AD | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 5AE | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5AG | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5AH | 189P125030 | CAPACITOR(C) | 25V 1μF-M |
| C 5AJ | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5AK | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5AL | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 5AM | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 5AN | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5AP | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 5AQ | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 5AR | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5AS | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5AT | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 5AU | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 5CB | 154P341030 | CAPACITOR(C) | CH50V 12pF-J |
| C 5D0 | 181P500080 | CAPACITOR(C) | 04W 10V 33μF-M |
| C 5E0 | 154P353060 | CAPACITOR(C) | SL50V 100pF-J |
| C 5E1 | 154P353060 | CAPACITOR(C) | SL50V 100pF-J |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| C 5E2 | 154P353060 | CAPACITOR(C) | SL50V 100pF-J |
| C 5E3 | 154P353060 | CAPACITOR(C) | SL50V 100pF-J |
| C 5FA | 154P343050 | CAPACITOR(C) | CH50V 100pF-J |
| C 5FB | 154P343050 | CAPACITOR(C) | CH50V 100pF-J |
| C 5FC | 154P344050 | CAPACITOR(C) | CH25V 270pF-J |
| C 5FD | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5FE | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5FG | 154P342030 | CAPACITOR(C) | CH50V 33pF-J |
| C 5FH | 154P342030 | CAPACITOR(C) | CH50V 33pF-J |
| C 5FL | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5FM | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5FP | 154P329020 | CAPACITOR(C) | SL25V 4700pF-J |
| C 5FQ | 154P329020 | CAPACITOR(C) | SL25V 4700pF-J |
| C 5FS | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5FT | 141P141050 | CAPACITOR(C) | B50V 3300pF-K |
| C 5FU | 181P500080 | CAPACITOR(C) | 04W 10V 33μF-M |
| C 5FY | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 5FZ | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5GA | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5GB | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5GC | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 5GD | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5GE | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 5KB | 189P121010 | CAPACITOR(C) | 6.3V 3.3μF-M |
| C 5LA | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5LB | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 5LC | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 5LD | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5LE | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5RA | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 5ZA | 141P135090 | CAPACITOR(C) | F25V 0.22μF-Z |
| C 5ZB | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 6A0 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 6A1 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 6A3 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 6A4 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 6A5 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 6A6 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 6A7 | 181P508000 | CAPACITOR(C) | 04W 4V 100μF-M |
| C 6A8 | 154P344030 | CAPACITOR(C) | CH50V 220pF-J |
| C 6A9 | 181P509020 | CAPACITOR(C) | 04W 35V 2.2μF-M |
| C 6AA | 141P141080 | CAPACITOR(C) | B50V 5600pF-K |
| C 6AB | 181P515000 | ELECTROLYTIC-C(C) | 35V 10μF-M |
| C 6AD | 141P137040 | CAPACITOR(C) | B25V 0.022μF-K |
| C 6AF | 141P141080 | CAPACITOR(C) | B50V 5600pF-K |
| C 6AG | 181P515000 | ELECTROLYTIC-C(C) | 35V 10μF-M |
| C 6AJ | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 6AL | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 6AM | 141P137040 | CAPACITOR(C) | B25V 0.022μF-K |
| C 6AN | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 6AP | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 6AQ | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 6AR | 181P508050 | CAPACITOR(C) | 04W 6.3V 22μF-M |
| C 6AU | 181P509050 | CAPACITOR(C) | 07W 50V 0.22μF-M |
| C 6AV | 181P509050 | CAPACITOR(C) | 07W 50V 0.22μF-M |
| C 6B0 | 141P135000 | CAPACITOR(C) | F25V 0.22μF-Z |
| C 6B1 | 181P509080 | CAPACITOR(C) | 04W 50V1μF-M |
| C 6B2 | 181P509080 | CAPACITOR(C) | 04W 50V1μF-M |
| C 6B3 | 141P135000 | CAPACITOR(C) | F25V 0.22μF-Z |
| C 6B4 | 141P135000 | CAPACITOR(C) | F25V 0.22μF-Z |
| C 6B5 | 141P135000 | CAPACITOR(C) | F25V 0.22μF-Z [E] |
| C 6B6 | 141P135000 | CAPACITOR(C) | F25V 0.22μF-Z |
| C 6B7 | 189P122050 | CAPACITOR(C) | 10V 10μF-M |
| C 6B8 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 6B9 | 141P132020 | CAPACITOR(C) | B50V 0.012μF-K |
| C 6C0 | 189P122050 | CAPACITOR(C) | 10V 10μF-M |
| C 6C3 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 6C4 | 141P136040 | CAPACITOR(C) | F16V 2.2μF-Z |
| C 6C5 | 189P124040 | CAPACITOR(C) | 20V 2.2μF-M |
| C 6C6 | 141P131080 | CAPACITOR(C) | B50V 5600pF-K |
| C 6C7 | 154P340050 | CAPACITOR(C) | CH50V 4pF-C |
| C 6D1 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 6D2 | 141P144020 | CAPACITOR(C) | F16V 0.1μF-Z |
| C 6D3 | 141P135080 | CAPACITOR(C) | F25V 0.1μF-Z |
| C 6D4 | 154P341010 | CAPACITOR(C) | CH50V 10pF-C |
| C 6D5 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 6D6 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 6D7 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 6D8 | 141P136030 | CAPACITOR(C) | F16V 1μF-Z |
| C 6E0 | 154P343050 | CAPACITOR(C) | CH50V 100pF-J |
| C 6E1 | 189P122050 | CAPACITOR(C) | 10V 10μF-M |
| C 6E2 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 6E3 | 189P122050 | CAPACITOR(C) | 10V 10μF-M |
| C 6E4 | 154P343010 | CAPACITOR(C) | CH50V 68pF-J |
| C 6E5 | 154P353000 | CAPACITOR(C) | SL50V 56pF-J |
| C 6E7 | 154P342030 | CAPACITOR(C) | CH50V 33pF-J |
| C 6E8 | 154P341010 | CAPACITOR(C) | CH50V 10pF-C |
| C 6ZA | 141P139010 | CAPACITOR(C) | B25V 0.068μF-K |
| C 6ZB | 141P137080 | CAPACITOR(C) | B25V 0.047μF-K |
| C 6ZC | 141P137080 | CAPACITOR(C) | B25V 0.047μF-K |
| C 6ZD | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 6ZE | 141P139010 | CAPACITOR(C) | B25V 0.068μF-K |
| C 6ZF | 141P137080 | CAPACITOR(C) | B25V 0.047μF-K |
| C 6ZG | 141P137080 | CAPACITOR(C) | B25V 0.047μF-K |
| C 6ZH | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 800 | 141P144000 | CAPACITOR(C) | F25V 0.033μF-Z |
| C 801 | 141P143080 | CAPACITOR(C) | F50V 0.01μF-Z |
| C 803 | 154P341050 | CAPACITOR(C) | CH50V 15pF-J |
| C 804 | 154P341050 | CAPACITOR(C) | CH50V 15pF-J |
| C 805 | 154P342050 | CAPACITOR(C) | CH50V 39pF-J |
| C 806 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 807 | 181P500080 | CAPACITOR(C) | 04W 10V 33μF-M |
| C 808 | 141P135070 | CAPACITOR(C) | F16V 1μF-Z |
| C 809 | 181P500040 | CAPACITOR(C) | 6.3V 100μF-M |
| C 810 | 141P140090 | CAPACITOR(C) | B50V 1000pF-K |
| C 812 | 141P140010 | CAPACITOR(C) | B50V 220pF-K |
| C 901 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| C 907 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 908 | 189P123010 | CAPACITOR(C) | 16V 1μF-M |
| C 909 | 141P141050 | CAPACITOR(C) | B50V 3300pF-K |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| C 910 | 154P355060 | CAPACITOR(C) | SL25V 680pF-J |
| C 911 | 141P142010 | CAPACITOR(C) | B25V 0.01μF-K |
| C 917 | 181P502060 | CAPACITOR(C) | 16V 47μF-M |
| C 918 | 181P500080 | CAPACITOR(C) | 04W 10V 33μF-M |
| C 919 | 181P505000 | CAPACITOR(C) | 04W 35V 10μF-M |
| C 922 | 141P139030 | CAPACITOR(C) | B25V 0.1μF-K |
| VC2AA | 202P220010 | CAPACITOR(C) | 3pF-10pF |
| VC500 | 202P220040 | TRIMMER CAPACITOR(C) | 9pF-40pF 4KA |
| VC6A1 | 202P220030 | C-TANTALUM(C) | 7pF-30pF |
| VC800 | 202P220050 | TRIMMER CAPACITOR(C) | 13pF-50pF 4K |

## SWITCHES

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| | 928D046001 | CASSETTE SW ASSY | |
| S 2000 | 432P088010 | KEY BOARD SWITCH | EJECT |
| S 711 | 432P094010 | KEY BOARD SWITCH | FF |
| S 713 | 432P093010 | KEY BOARD SWITCH | PB |
| S 715 | 432P094010 | KEY BOARD SWITCH | REW |
| S 717 | 432P093010 | KEY BOARD SWITCH | STOP |
| S 721 | 432P093010 | KEY BOARD SWITCH | STILL |
| S 725 | 432P090010 | KEY BOARD SWITCH | START/SYOP |
| S 730 | 431C074050 | SLIDE SWITCH | POWER |
| SW571 | 439P027010 | LEAF SWITCH | |
| SW572 | 439P027010 | LEAF SWITCH | |
| SW573 | 439P013020 | LIMIT SWITCH | |
| SW574 | 439P026010 | MODE SWITCH | |

## MISCELLANEOUS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| | 928C730001 | A/C HEAD ASSY | |
| | 272P744010 | IC-SENSOR-CCD | MN3727FE |
| | 440C227010 | AV JACK | |
| | 451C137010 | EARPHONE JACK | |
| | 215B511030 | FPC CABLE | VA-CA |
| | 215B511040 | FPC CABLE | VB-SB |
| | 215B511050 | FPC CABLE | VS-JS |
| M 571 | 288P103020 | CAPSTAN MOTOR | |
| M 572 | 288P105020 | LOADING MOTOR | |
| T 571 | 460P103020 | A/C HEAD | |
| TP 25 | 299P136090 | TEST POINT | 1608 |
| TP 29 | 299P136090 | TEST POINT | 1608 |
| TP 2A | 299P136090 | TEST POINT | 1608 |
| TP 2C | 299P136090 | TEST POINT | 1608 |
| TP 2E | 299P136090 | TEST POINT | 1608 |
| TP 2K | 299P136090 | TEST POINT | 1608 |
| TP 2M | 299P136090 | TEST POINT | 1608 |
| TP 2S | 299P136090 | TEST POINT | 1608 |
| TP 2V | 299P136090 | TEST POINT | 1608 |
| TP 2Y | 299P136090 | TEST POINT | 1608 |
| TP 3A | 299P136090 | TEST POINT | 1608 |
| TP 3E | 299P136090 | TEST POINT | 1608 |
| TP 3F | 299P136090 | TEST POINT | 1608 |
| TP 3H | 299P136090 | TEST POINT | 1608 |
| TP 3L | 299P136090 | TEST POINT | 1608 |
| TP 3R | 299P136090 | TEST POINT | 1608 |
| TP 3Y | 299P136090 | TEST POINT | 1608 |
| TP 5A | 299P136090 | TEST POINT | 1608 |
| TP 5P | 299P136090 | TEST POINT | 1608 |
| TP 5Q | 299P136090 | TEST POINT | 1608 |
| TP 5R | 299P136090 | TEST POINT | 1608 |
| TP 5S | 299P136090 | TEST POINT | 1608 |
| TP 5X | 299P136090 | TEST POINT | 1608 |
| TP 6J | 299P136090 | TEST POINT | 1608 |
| TP 6X | 299P136090 | TEST POINT | 1608 |
| TP 8A | 299P136090 | TEST POINT | 1608 |
| TP 8D | 299P136090 | TEST POINT | 1608 |
| TP 8E | 299P136090 | TEST POINT | 1608 |
| TP S1 | 299P136090 | TEST POINT | 1608 |
| TP S2 | 299P136090 | TEST POINT | 1608 |
| TP2AA | 299P136090 | TEST POINT | 1608 |
| TP2AB | 299P136090 | TEST POINT | 1608 |
| TP2X1 | 299P136090 | TEST POINT | 1608 |
| TP2X2 | 299P136090 | TEST POINT | 1608 |
| TP3AA | 299P136090 | TEST POINT | 1608 |
| TP3AB | 299P136090 | TEST POINT | 1608 |
| TP3AE | 299P136090 | TEST POINT | 1608 |
| TP3AG | 299P136090 | TEST POINT | 1608 |
| TP3AJ | 299P136090 | TEST POINT | 1608 |
| TP3AL | 299P136090 | TEST POINT | 1608 |
| TP3AM | 299P136090 | TEST POINT | 1608 |
| TP3AN | 299P136090 | TEST POINT | 1608 |
| TP3AP | 299P136090 | TEST POINT | 1608 |
| TP3AQ | 299P136090 | TEST POINT | 1608 |
| TP3AR | 299P136090 | TEST POINT | 1608 |
| TP3AS | 299P136090 | TEST POINT | 1608 |
| TP3AT | 299P136090 | TEST POINT | 1608 |
| TP3AY | 299P136090 | TEST POINT | 1608 |
| TP3X1 | 299P136090 | TEST POINT | 1608 |
| TP500 | 299P136090 | TEST POINT | 1608 |
| TP5GA | 299P136090 | TEST POINT | 1608 |
| TP5GD | 299P136090 | TEST POINT | 1608 |
| TP5GU | 299P136090 | TEST POINT | 1608 |
| TP5HL | 299P136090 | TEST POINT | 1608 |
| X 2AA | 285P164010 | CRYSTAL RESONATOR | 25.750MHz |
| X 5A0 | 285P102030 | CRYSTAL RESONATOR | 7.9872MHz |
| X 6A1 | 285P167010 | CRYSTAL RESONATOR | HC-49/U-S |
| X 800 | 285P054020 | CRYSTAL RESONATOR | 32.768KHz |
| Z 571 | 299P168010 | DEW SENSOR | SHS-A3 |
| Z 5A0 | 299P137010 | PROTECTOR(C) | 1A |
| Z 5AA | 299P137010 | PROTECTOR(C) | 1A |
| Z 6AA | 299P162010 | ANGLE SENSOR | ENC-05S-01 |
| Z 6AB | 299P162010 | ANGLE SENSOR | ENC-05S-01 |
| Z 901 | 299P137010 | PROTECTOR(C) | 1A |
| Z 903 | 299P137040 | SURGE ABSORBER | 0.4A |

## PRINTED CIRCUIT BOARD ASSY'S

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
| | 928C722006 | CCD PCB ASSY | |
| | 928C724007 | CM PCB ASSY | |
| | 928D041030 | EVF PCB ASSY | |
| | 928C749001 | GYRO SENS PCB ASSY | |
| | 928D065001 | MF PCB ASSY | |
| | 928C725001 | POWER SW PCB ASSY | |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|
|  | 928C795001 | REAR PCB ASSY |  |
|  | 928C800001 | SD/PC PCB ASSY |  |
|  | 928C746006 | VTR SW PCB ASSY |  |
|  | 928D068001 | TRAP PCB ASSY |  |
|  |  |  |  |
|  | 927B621001 | VTR PCB ASSY |  |
|  | 928C719005 | VTR-SUB PCB ASSY |  |

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION |
|---|---|---|---|

# 12. AC POWER ADAPTER

### INTEGRATED CIRCUITS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| IC101 | 266D113040 | IC | FA5311S | |
| IC201 | 267D001010 | IC | AN8004TA | |

### TRANSISTORS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| Q 101 | 260D213040 | TRANSISTOR | 2SK1572 | |
| Q 201 | 260D213050 | TRANSISTOR | 2SB1299 | |
| Q 202 | 260D213060 | TRANSISTOR | 0.6W 20V | |

### DIODES

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| D 101 | 264D141040 | DIODE | S1WB60S | |
| D 102 | 264D141050 | DIODE | ERA91-02/AL01Z | |
| D 103 | 264D141050 | DIODE | ERA91-02/AL01Z | |
| D 104 | 264D121030 | DIODE | ERA22-08 445012588 | |
| D 201 | 264D141080 | DIODE | 90V-5A | |
| D 202 | 264D141090 | DIODE | 75V-0.15A | |
| PD201 | 264D124040 | LIGHT EMITTING DIODE | | |
| PD202 | 264D124040 | LIGHT EMITTING DIODE | | |
| ZD101 | 264D141060 | DIODE | ZENER 4.7V | |
| ZD102 | 264D141070 | DIODE | ZENER 24V | |
| ZD103 | 264D141070 | DIODE | ZENER 24V | |
| ZD201 | 264D124050 | DIODE | ZENER 5.1V | |

### COILS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| L 101 | 351D046010 | CHOKE COIL | ELF18D290A | |
| L 102 | 351D046010 | CHOKE COIL | ELF18D290A | |
| L 201 | 351D046020 | CHOKE COIL | 10MHz | |

### TRANSFORMERS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| T 101 | 350D041050 | TRANSFORMER | ETB-22KA650X | |

### RESISTORS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| R 102 | 103P401030 | RESISTOR(C) | 1/10W 100-J | |
| R 104 | 103P400090 | RESISTOR(C) | 1/10W 47-J | |
| R 108 | 103P354090 | RESISTOR(C) | 1/8W 100K-J | |
| R 109 | 103P354090 | RESISTOR(C) | 1/8W 100K-J | |
| R 110 | 103P355030 | RESISTOR(C) | 1/8W 220K-J | |
| R 111 | 103P402000 | RESISTOR(C) | 1/10W 390-J | |
| R 113 | 103P403050 | RESISTOR(C) | 1/10W 6.8K-J | |
| R 115 | 103P354090 | RESISTOR(C) | 1/8W 100K-J | |
| R 116 | 103P354090 | RESISTOR(C) | 1/8W 100K-J | |
| R 117 | 103P355030 | RESISTOR(C) | 1/8W 220K-J | |
| R 118 | 103P355030 | RESISTOR(C) | 1/8W 220K-J | |
| R 119 | 103P355030 | RESISTOR(C) | 1/8W 220K-J | |
| R 201 | 103P401090 | RESISTOR(C) | 1/10W 330-J | |
| R 203 | 103P400050 | RESISTOR(C) | 1/10W 22-J | |
| R 206 | 103P405060 | RESISTOR(C) | 1/10W 390K-J | |

### CAPACITORS AND TRIMMERS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| C 110 | 185D070010 | ELECTROLYTIC-C | 400V 47M | |

### MISCELLANEOUS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| CN201 | 451D057020 | JACK | DC-POWER | |
| F 101 | 283D086060 | FUSE | 250V 1.6A ET | [A, B] |
| F 101 | 283D086050 | FUSE | 250V 1.6A 19181 | [E] |
| PC101 | 268D015020 | PHOTO COUPLER | PS2652/2 | |

### COSMETIC PARTS

| SYMBOL NO. | PARTS NO. | PARTS NAME | DESCRIPTION | |
|---|---|---|---|---|
| | 242D410030 | AC POWER CORD | | [E] |
| | 242D410040 | AC POWER CORD | | [B] |
| | 242D410050 | AC POWER CORD | | [A] |
| | 700D028030 | TOP CASE | | |
| | 700D029030 | BOTTOM CASE | | [E] |
| | 700D029040 | BOTTOM CASE | | [B] |
| | 700D029050 | BOTTOM CASE | | [A] |

Note: Broken AC power cord must be exchanged with a new original power cord.

# CIRCUIT DIAGRAMS

# DC VOLTAGE TABLES (FULL AUTO, SP MODE)

## PCB-CM

### IC 4AA

| PIN No. | |
|---|---|
| 1 | 0.1V |
| 2 | — |
| 3 | — |
| 4 | — |
| 5 | — |
| 6 | 0.5~1.5V |
| 7 | — |
| 8 | — |
| 9 | 3~4V |
| 10 | — |
| 11 | — |
| 12 | — |
| 13 | — |
| 14 | 4.8V |
| 15 | — |
| 16 | — |
| 17 | 0V |
| 18 | — |
| 19 | — |
| 20 | 0.1V |
| 21 | — |
| 22 | 0V |
| 23 | — |
| 24 | — |
| 25 | 4.8V |
| 26 | 0.1V |
| 27 | 0.8~1.5V |
| 28 | 4.4V |
| 29 | 0V |
| 30 | 0V |
| 31 | — |
| 32 | — |
| 33 | — |
| 34 | 0V |
| 35 | 0V |
| 36 | 0V |
| 37 | 0V |
| 38 | 2.4V |
| 39 | 4.8V |
| 40 | — |
| 41 | — |
| 42 | 0.4V |
| 43 | — |
| 44 | — |

### IC 5AA

| PIN No. | | PIN No. | |
|---|---|---|---|
| 1 | — | 41 | — |
| 2 | 0V | 42 | 0V |
| 3 | 0~3V | 43 | 4.7V |
| 4 | 4.8V | 44 | 0~2V |
| 5 | 0V | 45 | 0.3V |
| 6 | 0V | 46 | 0V |
| 7 | 0V | 47 | 0V |
| 8 | 4.8V | 48 | ~ |
| 9 | 0V | 49 | 4.7V |
| 10 | ~ | 50 | 4.8V |
| 11 | ~ | 51 | 0V |
| 12 | 4.8V | 52 | 0V |
| 13 | 0V | 53 | 0V |
| 14 | 4.7V | 54 | 0V |
| 15 | 4.8V | 55 | 0V |
| 16 | 4.8V | 56 | 0V |
| 17 | 4~5V | 57 | 0V |
| 18 | 0.5V | 58 | 2.3V |
| 19 | 0V | 59 | 2.5V |
| 20 | — | 60 | 2V |
| 21 | — | 61 | 0V |
| 22 | — | 62 | 4.8V |
| 23 | — | 63 | 0V |
| 24 | — | 64 | 3.6V |
| 25 | 0V | 65 | 4.3V |
| 26 | 4.8V | 66 | 4.8V |
| 27 | — | 67 | 2.4V |
| 28 | 2.2V | 68 | 4.8V |
| 29 | — | 69 | 4.8V |
| 30 | — | 70 | 0V |
| 31 | — | 71 | 4.8V |
| 32 | 0V | 72 | 4.8V |
| 33 | 4.8V | 73 | 0V |
| 34 | 0V | 74 | 0.5V |
| 35 | 0V | 75 | 4.8V |
| 36 | ~ | 76 | 4.8V |
| 37 | 0V | 77 | 4.8V |
| 38 | 4.8V | 78 | 0V |
| 39 | 0V | 79 | ~ |
| 40 | 0.8~2V | 80 | — |

### IC 5EA

| PIN No. | |
|---|---|
| 1 | — |
| 2 | 4.8V |
| 3 | 0V |
| 4 | 4.8V |
| 5 | ~ |
| 6 | 0.1V |
| 7 | 0V |
| 8 | 3V |

### IC 5FA

| PIN No. | |
|---|---|
| 1 | — |
| 2 | 1.9V |
| 3 | 0V |
| 4 | 4.8V |
| 5 | 0~3V |
| 6 | — |
| 7 | 0V |
| 8 | 4.8V |
| 9 | — |
| 10 | — |
| 11 | 0V |
| 12 | — |
| 13 | 4.8V |
| 14 | 6.5V |
| 15 | ~ |
| 16 | — |
| 17 | -0.1V |
| 18 | -0.1V |
| 19 | ~ |
| 20 | ~ |
| 21 | 0.1V |
| 22 | — |
| 23 | 0V |
| 24 | — |
| 25 | ~ |
| 26 | — |
| 27 | 6.5V |
| 28 | 4.8V |
| 29 | — |
| 30 | 4.8V |

### IC 5GA

| PIN No. | | PIN No. | |
|---|---|---|---|
| 1 | 4.8V | 33 | 0.8~1.5V |
| 2 | 4.8V | 34 | 0.8~1.5V |
| 3 | 4.8V | 35 | 4.8V |
| 4 | 2.1V | 36 | 0.7V |
| 5 | 4.8V | 37 | 0V |
| 6 | — | 38 | 0.6V |
| 7 | 0V | 39 | 0V |
| 8 | 0.7V | 40 | 0.7V |
| 9 | 0V | 41 | 0V |
| 10 | 0V | 42 | 0.6V |
| 11 | 0V | 43 | 0.6V |
| 12 | 0V | 44 | 0V |
| 13 | 0V | 45 | 0.7V |
| 14 | 0V | 46 | 0~1.5V |
| 15 | 0V | 47 | 0~1.5V |
| 16 | 0V | 48 | 1.2V |
| 17 | 0~0.5V | 49 | 4.8V |
| 18 | 0.1V | 50 | 0V |
| 19 | 0.1V | 51 | 0V |
| 20 | 2.3V | 52 | 0~1.2V |
| 21 | 2.4V | 53 | 4.8V |
| 22 | 0V | 54 | 0.8~2V |
| 23 | 2V | 55 | 2.2V |
| 24 | 0V | 56 | 4.8V |
| 25 | 4.8V | 57 | 0V |
| 26 | 2.4V | 58 | 2.1V |
| 27 | 4.8V | 59 | -0.1V |
| 28 | 0.4V | 60 | ~ |
| 29 | 0.4V | 61 | 0V |
| 30 | 0.7V~1.2V | 62 | 0V |
| 31 | 0.6V~1.2V | 63 | 0V |
| 32 | — | 64 | 0V |

### IC 5LB

| PIN No. | |
|---|---|
| 1 | 1.8v |
| 2 | 1.8v |
| 3 | 0v |
| 4 | 4.8v |
| 5 | 4.8v |

### IC 5RA

| PIN No. | |
|---|---|
| 1 | 4.8v |
| 2 | 0v |
| 3 | 4.8v |

### IC 5LA

| PIN No. | |
|---|---|
| 1 | 1.9V |
| 2 | 2V |
| 3 | 2V |
| 4 | 4.8V |
| 5 | 4.3V |
| 6 | 1V |
| 7 | 3.6V |
| 8 | 1.8V |
| 9 | 1.8V |
| 10 | 1.8V |
| 11 | 0V |
| 12 | 1.9V |
| 13 | 1.8V |
| 14 | 3.6V |

### IC 5AE

| PIN No. | |
|---|---|
| 1 | 0V |
| 2 | 0V |
| 3 | 4.8V |
| 4 | 1.8V |
| 5 | 1.8V |
| 6 | 1.8V |
| 7 | 1.2V |
| 8 | 2V |
| 9 | 1.8V |
| 10 | 1.8V |
| 11 | 1.8V |
| 12 | 0V |
| 13 | 0V |
| 14 | 0V |

### IC 5AB

| PIN No. | |
|---|---|
| 1 | 0V |
| 2 | 0V |
| 3 | 0V |
| 4 | 0V |
| 5 | 1.8V |
| 6 | 1.8V |
| 7 | 2.2V |
| 8 | 4.8V |

### IC 5AC

| PIN No. | |
|---|---|
| 1 | 1.8V |
| 2 | 1.8V |
| 3 | 1.8V |
| 4 | 4.8V |
| 5 | 1.8V |
| 6 | 1.9V |
| 7 | 1.9V |
| 8 | 1.8V |
| 9 | 1.8V |
| 10 | 1.8V |
| 11 | 0V |
| 12 | 1.8V |
| 13 | 1.8V |
| 14 | 1.8V |

### TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Q 5AE | 1.8V | 1.8V | 0V | 1.8V | 0V |
| Q 5AG | 1.8V | 1.8V | 0.1V | 1.8V | 0.1V |

### TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Q 5AC | 4.8V | 2.4V | 1.8V | 4.8V | 4.8V | 4.2V |
| Q 5GA | 4.8V | 1.3V | 0.7V | 4.8V | 2.7V | 2.1V |

### TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q 5AB | 4.8V | 4.7V | 4.8V |
| Q 5AD | 0V | 0.5~1.5V | 1.2V |
| Q 5FC | 0.7V | 1.4V | 1.6V |
| Q 5FD | 2V | 2.7V | 4.8V |
| Q 5FE | 2.5V | 1.9V | 0V |
| Q 5FG | 2.5V | 1.9V | 0V |
| Q 5FH | 0.6V | 1.2V | 4.8V |
| Q 5FJ | 0.7V | 1.2V | 4.8V |
| Q 5FL | 1.3V | 0.7V | 0V |
| Q 5LB | 2.9V | 3.6V | 3.9V |
| Q 5LC | 4.8V | 4.8V | 0V |

### IC 5ZA

| PIN No. | |
|---|---|
| 1 | -0.1V |
| 2 | -0.1V |
| 3 | 0V |
| 4 | 6.5V |
| 5 | 0.9V |
| 6 | — |
| 7 | 0V |
| 8 | 0V |

## PCB-GYRO-SENS (LENS CAP ON)

IC 6AA

| PIN No. | |
|---|---|
| 1 | 2.3V |
| 2 | 2.3V |
| 3 | 2.3V |
| 4 | 4.9V |
| 5 | 2.2V |
| 6 | 2.3V |
| 7 | 2.3V |
| 8 | 2.3V |
| 9 | 2.3V |
| 10 | 2.2V |
| 11 | 0V |
| 12 | 2.3V |
| 13 | 2.3V |
| 14 | 2.4V |

TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q 6AB | 2.3V | 0V | 4.9V |
| Q 6AC | 4.9V | 4.9V | 0V |

TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Q 6AA | 4.9V | 2.9V | 2.3V | 4.9V | 3V | 2.3V |

## SENSOR-DRIVE (LENS-CAP ON)

IC 2AB

| PIN No. | |
|---|---|
| 1 | -7.1V |
| 2 | -7.1V |
| 3 | 0.6V |
| 4 | 0V |
| 5 | -0.1V |
| 6 | 4.8V |
| 7 | 0.1V |
| 8 | 4.9V |
| 9 | 0.1V |
| 10 | 4.9V |
| 11 | — |
| 12 | 4.7V |
| 13 | 4.9V |
| 14 | 4.7V |
| 15 | 0V |
| 16 | 15V |
| 17 | -6.7V |
| 18 | -6.7V |
| 19 | 0.9V |
| 20 | 18V |

IC 2AD

| PIN No. | |
|---|---|
| 1 | — |
| 2 | 2.5V |
| 3 | 0V |
| 4 | 2.4V |
| 5 | 4.9V |

TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q 2AC | 8.4V | 8.3V | 5.6V |
| Q 2AJ | 15V | 15.6V | 18V |

## PROCESS (LENS CAP ON)

IC 3AA

| PIN No. | | PIN No. | |
|---|---|---|---|
| 1 | 0V | 41 | 1.9V |
| 2 | 0.6V~1.2V | 42 | 1.1V |
| 3 | 1.8V | 43 | — |
| 4 | 1V | 44 | 1.8V |
| 5 | 1.9V | 45 | 0.7V |
| 6 | 1.4V | 46 | 3.1V |
| 7 | 2.4V | 47 | 1.9V |
| 8 | 0V | 48 | 1.8V |
| 9 | 4.4V | 49 | 1.8V |
| 10 | 1.8V | 50 | 3.2V |
| 11 | 1.8V | 51 | 2.1V |
| 12 | 4.9V | 52 | 2.2V |
| 13 | 1.8V | 53 | 1.8V |
| 14 | 1.8V | 54 | 4.9V |
| 15 | 2.2V | 55 | — |
| 16 | 1.9V | 56 | 2.8V |
| 17 | 1.9V | 57 | 1.8V |
| 18 | 1.6V | 58 | — |
| 19 | 2.4V | 59 | 1.8V |
| 20 | 3.1V | 60 | 1.8V |
| 21 | 2.3V | 61 | 1.8V |
| 22 | 0V | 62 | — |
| 23 | — | 63 | 2.5V |
| 24 | 1.8V | 64 | 0V |
| 25 | 2.3V | 65 | 1.2V |
| 26 | 3.2V | 66 | 1.7V |
| 27 | — | 67 | 1V |
| 28 | 1.8V | 68 | 3V |
| 29 | 1.8V | 69 | 1V |
| 30 | 3.2V | 70 | 1.8V |
| 31 | 1.9V | 71 | 1.8V |
| 32 | 3.2V | 72 | 1.8V |
| 33 | 2V | 73 | 0.6V |
| 34 | 1.8V | 74 | 3.1V |
| 35 | 1.9V | 75 | 3.1V |
| 36 | 1.8V | 76 | 2.1V |
| 37 | — | 77 | 1.9V |
| 38 | 3.2V | 78 | 1.8V |
| 39 | 1.6V | 79 | 2.9V |
| 40 | 1.8V | 80 | 2.1V |

IC 3AB

| PIN No. | |
|---|---|
| 1 | -2.4V |
| 2 | — |
| 3 | — |
| 4 | 2.3V |
| 5 | 2.5V |
| 6 | 1.9V |
| 7 | — |
| 8 | — |
| 9 | — |
| 10 | 0V |
| 11 | — |
| 12 | — |
| 13 | 2.2V |
| 14 | — |
| 15 | 4.9V |
| 16 | 8.4V |

IC 3AD

| PIN No. | |
|---|---|
| 1 | 0V |
| 2 | 2.8V |
| 3 | 1.8V |
| 4 | 2.7V |
| 5 | 1.6V |
| 6 | 1.5V |
| 7 | 1.1V |
| 8 | 1.5V |
| 9 | 3.1V |
| 10 | 4.9V |
| 11 | 4.9V |
| 12 | 1.9V |
| 13 | 1.4V |
| 14 | ~ |
| 15 | 0V |
| 16 | 4.8V |
| 17 | ~ |
| 18 | 1.9V |
| 19 | 1.9V |
| 20 | 0V |

IC 3AC

| PIN No. | |
|---|---|
| 1 | 0V |
| 2 | 2.4V |
| 3 | 8.4V |
| 4 | — |
| 5 | — |
| 6 | 5V |
| 7 | 2V |
| 8 | 2.1V |
| 9 | 2.1V |
| 10 | 0V |
| 11 | 2V |
| 12 | — |
| 13 | — |
| 14 | 2.4V |
| 15 | 2.5V |
| 16 | 2.4V |

IC 3AE

| PIN No. | |
|---|---|
| 1 | 0V |
| 2 | 2.6V |
| 3 | 0V |
| 4 | 2.3V |
| 5 | 2V |
| 6 | 0.1V |
| 7 | 0.1V |
| 8 | 1.8V |
| 9 | 3.3V |
| 10 | 4.9V |
| 11 | 4.9V |
| 12 | 2.8V |
| 13 | 2V |
| 14 | ~ |
| 15 | 0V |
| 16 | 4.7V |
| 17 | ~ |
| 18 | 2.3V |
| 19 | 1.6V |
| 20 | 0V |

TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q 3AD | 3V | 3.6V | 4.9V |
| Q 3AG | 1.3V | 2V | 4.9V |
| Q 3AH | 3V | 2.4V | 0V |
| Q 3AJ | 3.1V | 3.7V | 4.9V |
| Q 3AK | 1.8V | 2.4V | 4.9V |
| Q 3AL | 1.8V | 0V | 0V |
| Q 3AQ | 0V | 4.8V | 0V |
| Q 3AY | 1.2V | 1.8V | 4.9V |
| Q 3AZ | 1.8V | 1V | 1.8V |
| Q 3BB | 1.8V | 0.2V | 1.8V |
| Q 3BD | 0V | 0V | 1.8V |
| Q 3BG | 1.3V | 1.9V | 4.9V |
| Q 3BJ | 0V | 0.1V | 2~3V |

TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Q 3AN | 1.8V | 1.8V | 2~3V | 1.8V | 0V |
| Q 3AP | 0V | 0V | 4.8V | 0V | 4.8V |
| Q 3BC | 4.2V | 0V | 4.2V | 0V | 0V |

TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Q 3AM | 0V | 7.7V | 0V | 8.4V | 0.6V | 0V |
| Q 3AS | 0V | 2.7V | 2.4V | 0V | 1.8V | 2.4V |
| Q 3AW | 4.9V | 1.2V | 1.8V | 0V | 1.8V | 1.2V |
| Q 3BF | 4.9V | 1.8V | 1.2V | 4.9V | 0V | 1.2V |
| Q 3BH | 4.9V | 3.1V | 3.7V | 0V | 3.7V | 3.1V |

The voltages parenthesised are on SP recording mode.
While those without parenthesised on SP play back mode.

## CHROMA

IC 6A1

| Pin | | Pin | | Pin | | Pin | |
|---|---|---|---|---|---|---|---|
| 1 | 3.4V(3.8V) | 17 | 2.1V | 33 | ~ | 49 | 2.5V |
| 2 | 0.5V | 18 | 1.5V | 34 | 0V | 50 | 2.2V |
| 3 | 2.6V | 19 | 0V | 35 | 0.4V | 51 | 0V |
| 4 | 0V | 20 | 1.5V | 36 | 4.8V | 52 | 3V(2.6V) |
| 5 | 0V | 21 | 2.1V | 37 | ~ | 53 | 5V |
| 6 | 0V | 22 | 2.1V | 38 | 4.8V | 54 | 5V |
| 7 | 3V | 23 | 1.6V(2.3V) | 39 | 0.2V | 55 | 0V |
| 8 | 3.4V(3.8V) | 24 | 2.1V | 40 | 3.4V | 56 | 2.3V(1.9V) |
| 9 | 2.3V | 25 | 0.9V | 41 | 2.2V | 57 | 0V |
| 10 | 2.7V(4.2V) | 26 | 4.8V(2.3V) | 42 | 2.5V | 58 | 3.1V |
| 11 | 3V(4.1V) | 27 | 0V(0.3V) | 43 | 2.1V | 59 | 2.8V |
| 12 | 4.8V | 28 | 0V | 44 | 0V | 60 | 2.9V |
| 13 | 2V | 29 | 0V | 45 | 2.5V | 61 | 4.8V |
| 14 | 1.6V | 30 | 0V(4.3V) | 46 | 2.5V | 62 | 2.6V |
| 15 | 3V | 31 | 0.4V | 47 | 2.5V(1.8V) | 63 | 4.2V(3V) |
| 16 | 2.1V | 32 | 0V | 48 | 3V | 64 | 1.6V |

TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q6A3 | 0V | 0V | 0.4V |
| Q6A4 | 4.2V | 5V | 5V |
| Q6A5 | 4.8V | 0.1V(5V) | 4.8V(2.3V) |

TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Q6A1 | 0V(0.2V) | 0V(0.3V) | 2.6V(0V) | 0V | 2.6V(0V) |

## TELOP

IC 502

| Pin | |
|---|---|
| 1 | — |
| 2 | 0V |
| 3 | 0.7V(1.6V) |
| 4 | 0.7V(0.1V) |
| 5 | 2.2V |
| 6 | 5V |
| 7 | 3.4V(2.6V) |
| 8 | — |
| 9 | — |
| 10 | 1V(1.8V) |
| 11 | 0.7V(1.6V) |
| 12 | 0V |
| 13 | 5V |
| 14 | 0V |
| 15 | 0V |
| 16 | — |
| 17 | — |
| 18 | 1.6V |
| 19 | 1.4V |
| 20 | 0V |
| 21 | 0.9V |
| 22 | 0.9V |
| 23 | 0.9V |
| 24 | — |
| 25 | — |
| 26 | 1.6V |
| 27 | 1.6V |
| 28 | 1.4V |
| 29 | 2.3V |
| 30 | 0.7V(1.6V) |
| 31 | 0.7V(1.6V) |
| 32 | — |

IC 500

| Pin | |
|---|---|
| 1 | — |
| 2 | 1~3V |
| 3 | 2~3V |
| 4 | 2~3V |
| 5 | 2~3V |
| 6 | 2.5V |
| 7 | 2.4V |
| 8 | 2.5V |
| 9 | 2V |
| 10 | 2V |
| 11 | 0.2V |
| 12 | 0.2V |
| 13 | 0.2V |
| 14 | 0V |
| 15 | 0.2V |
| 16 | 0.2V |
| 17 | 0.2V |
| 18 | 0.2V |
| 19 | 0.2V |
| 20 | 0V |
| 21 | 1~3V |
| 22 | 0V |
| 23 | 1~3V |
| 24 | 2~3V |
| 25 | 2~3V |
| 26 | 0V |
| 27 | 5V |
| 28 | 5V |

IC 501

| Pin | | Pin | |
|---|---|---|---|
| 1 | 2.5V | 23 | 5V |
| 2 | 2.4V | 24 | 0V |
| 3 | 2.4V | 25 | 0V |
| 4 | 2~3V | 26 | 5V |
| 5 | 2~3V | 27 | — |
| 6 | 2~3V | 28 | 0V |
| 7 | 1~3V | 29 | 1~3V |
| 8 | — | 30 | 2~3V |
| 9 | 4.5V(5V) | 31 | 1~3V |
| 10 | 5V | 32 | 0V |
| 11 | 5V | 33 | 1~3V |
| 12 | 0V | 34 | 0.2V |
| 13 | 0V | 35 | 0.2V |
| 14 | 0V | 36 | 0.3V |
| 15 | 0V | 37 | 0.3V |
| 16 | 0V | 38 | 0.3V |
| 17 | 0V | 39 | 5V |
| 18 | 3.5V(0V) | 40 | 2V |
| 19 | 2.3V | 41 | 2V |
| 20 | 2.5V | 42 | 0.2V |
| 21 | 0V | 43 | 0.2V |
| 22 | 5V | 44 | 0.2V |

IC 503

| Pin | |
|---|---|
| 1 | 2.3V |
| 2 | 0V |
| 3 | 2.4V |
| 4 | 0V |
| 5 | 3V |
| 6 | 5V |
| 7 | 1.6V |
| 8 | 0V |

IC 504

| Pin | |
|---|---|
| 1 | 0V |
| 2 | 1V(1.8V) |
| 3 | 1.8V |
| 4 | 0V |
| 5 | 5V |
| 6 | 5V |
| 7 | 5V(1.7V) |
| 8 | 5V |

IC 505

| Pin | |
|---|---|
| 1 | 0V |
| 2 | 5V |
| 3 | 0V |
| 4 | 0.4V |
| 5 | 4.7V |
| 6 | 0.3V |
| 7 | 0V |
| 8 | 0V |
| 9 | 5V |
| 10 | 0V |
| 11 | 0V |
| 12 | 5V |
| 13 | 0V |
| 14 | 5V |

TRANSISTOR

| SYMBOL | (E) | (E) | (E) |
|---|---|---|---|
| Q500 | 0V | 0.2V | 5V |

TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Q501 | 5V | 4.5V | 0V | 0V | 0V |

## Y

IC 2A1

| Pin | | Pin | | Pin | | Pin | |
|---|---|---|---|---|---|---|---|
| 1 | 2V | 15 | 2.1V | 29 | 5V | 43 | 2.7V (0V) |
| 2 | 2.5V | 16 | 5V | 30 | 2.4V | 44 | — |
| 3 | 3.1V(4.2V) | 17 | 2.4V | 31 | 2.4V | 45 | 3.4V |
| 4 | 2.1V(4.2V) | 18 | — | 32 | 3.7V (0.5V) | 46 | 3.1V (4.3V) |
| 5 | 2.7V | 19 | ~ | 33 | 3V | 47 | 5V |
| 6 | 0.8V | 20 | 0V | 34 | 4.2V (1V) | 48 | 5V |
| 7 | — | 21 | 0V | 35 | 3.6V (0V) | 49 | 0.4V |
| 8 | 0V | 22 | 2.7V | 36 | 4.3V (5V) | 50 | 0V |
| 9 | 2.8V | 23 | 0V | 37 | 2.5V (4V) | 51 | 3.7V (2.1V) |
| 10 | 2.8V | 24 | 3.1V | 38 | 3V | 52 | 3.1V (0V) |
| 11 | 1.7V | 25 | 3.8V | 39 | 0.4V (0V) | 53 | 3.7V (2V) |
| 12 | 2.3V | 26 | 4.3V (3V) | 40 | 2.5V (0.4V) | 54 | 0.2V |
| 13 | — | 27 | 0V | 41 | 0.3V (0V) | 55 | 2.1V |
| 14 | 2.2V | 28 | 4.8V | 42 | 4.5V | 56 | 2.7V |

TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q2P1 | 2.5V (0V) | 3.3V (0V) | 5V (0V) |
| Q2V0 | 5V | 5V (4.2V) | 0V (5V) |
| Q2V1 | 5V | 4.3V (5V) | 5V (0V) |

IC 2P1

| Pin | |
|---|---|
| 1 | — |
| 2 | 0V |
| 3 | 5V (0V) |
| 4 | 3.3V (0V) |
| 5 | 1.4V (0.1V) |
| 6 | 2.6V (0V) |
| 7 | 2.4V (0V) |
| 8 | — |

IC 2R1

| Pin | |
|---|---|
| 1 | 0V |
| 2 | 5V |
| 3 | 2.3V |
| 4 | 3.8V |
| 5 | 2.1V |
| 6 | 2.2V |
| 7 | 2.3V |
| 8 | 2.5V |
| 9 | 5V |
| 10 | 5V |
| 11 | 5V |
| 12 | 3V |
| 13 | 3V |
| 14 | — |
| 15 | 0V |
| 16 | 4.7V |
| 17 | ~ |
| 18 | 2.3V |
| 19 | 2.5V |
| 20 | 0V |

## HEAD-AMP

IC 201

| Pin | | Pin | | Pin | | Pin | |
|---|---|---|---|---|---|---|---|
| 1 | — | 17 | 0.6V | 33 | 0V (4~5V) | 49 | 0~0.7V(0V) |
| 2 | 0V (4.8V) | 18 | 0V (3~5V) | 34 | 1.4V | 50 | 1.4V |
| 3 | — | 19 | 0V | 35 | 0~0.7V(0V) | 51 | 4.8V |
| 4 | 0V | 20 | 0.6V | 36 | 0.6V | 52 | ~ |
| 5 | 2.4V (4V) | 21 | 0~0.7V (~) | 37 | 0V | 53 | ~ |
| 6 | 4.7V | 22 | 1.4V | 38 | 0V (4~5V) | 54 | 0~0.4V |
| 7 | — | 23 | 0V (3~5V) | 39 | 0.6V | 55 | 5V (0V) |
| 8 | 0V (1.6V) | 24 | 1.4V | 40 | 0~0.7V(0V) | 56 | 0V (5V) |
| 9 | — | 25 | 0~0.7V (~) | 41 | 1.3V | 57 | 0V (1.6V) |
| 10 | 4.4V (0V) | 26 | 0.6V | 42 | 0V (4~5V) | 58 | 0V (2.7V) |
| 11 | 0~0.4V | 27 | 0V (3~5V) | 43 | 1.3V | 59 | 0~0.6V(0.8V) |
| 12 | ~ | 28 | 0V | 44 | 0~0.7V(0V) | 60 | 0~0.6V(0.7V) |
| 13 | ~ | 29 | 0.6V | 45 | 0.6V | 61 | 3.8V |
| 14 | 4.7V | 30 | 0~0.7V (~) | 46 | 0V | 62 | 2.4V (4V) |
| 15 | 1.4V | 31 | 1.4V (1V) | 47 | 0V (4~5V) | 63 | 3.8V |
| 16 | 0~0.7V (~) | 32 | 0V (3~5V) | 48 | 0.6V | 64 | 3.8V |

TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q202 | 0V (0.9V) | 0V (1.6V) | 0V (3.1V) |
| Q205 | 0V (2.5V) | 0V (3.1V) | 0V (5V) |
| Q291 | 0V (2.6V) | 0V (2.1V) | 0V |
| Q292 | 0V (4.4V) | 0V (3.8V) | 0V |
| Q294 | 0V (4.4V) | 0V (3.8V) | 0V |

## OPERATION

### IC 800

| Pin | | Pin | | Pin | | Pin | |
|---|---|---|---|---|---|---|---|
| 1 | 5V | 21 | 5V | 41 | 0.1V | 61 | 0V |
| 2 | 5V | 22 | 4.8V | 42 | 5V (0V) | 62 | 0V |
| 3 | 0.7V | 23 | 4.8V | 43 | 4~5V (0V) | 63 | 4.4V (0V) |
| 4 | 3.2V | 24 | 4~5V | 44 | 0V | 64 | — |
| 5 | 4.5V | 25 | 0.5V (0V) | 45 | 5V | 65 | 0V |
| 6 | 0V | 26 | 0.4V | 46 | 4.5V | 66 | 0V |
| 7 | ~ | 27 | 0V | 47 | 5V | 67 | — |
| 8 | 4.3V | 28 | 5V | 48 | 5V | 68 | — |
| 9 | 5V | 29 | 5V | 49 | 0V | 69 | 0V |
| 10 | 4~5V | 30 | 2.2V | 50 | 0V | 70 | 2~4V |
| 11 | 5V | 31 | 1.1V | 51 | 4.8V | 71 | 3~4V |
| 12 | 5V | 32 | 0V | 52 | 4.9V | 72 | 5V |
| 13 | 5V | 33 | 3~5V | 53 | 5V | 73 | 0V |
| 14 | 0V | 34 | 0~0.6V(0~1V) | 54 | 4.5V (0V) | 74 | 4~5V |
| 15 | 0V (5V) | 35 | 0~0.6V(0~1V) | 55 | ~ | 75 | 0.3V |
| 16 | 2~3V | 36 | 0~0.6V(0~1V) | 56 | 5V | 76 | 5V |
| 17 | ~ | 37 | 0~0.6V(0~1V) | 57 | 0V | 77 | 0V |
| 18 | — | 38 | 0~0.6V(0~1V) | 58 | 5V | 78 | 0.1V |
| 19 | 5V | 39 | — | 59 | 5V (1.6V) | 79 | 5V |
| 20 | 5V | 40 | 4.8V | 60 | 5V | 80 | 5V |

### TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q802 | 0V | 1.6V | 0V |

### IC 803

| Pin | |
|---|---|
| 1 | 4.3V |
| 2 | 5V |
| 3 | 0V |

### IC 801

| Pin | |
|---|---|
| 1 | 5V |
| 2 | 0V |
| 3 | 6.5V |

## I/O REAR

### IC 2001

| Pin | |
|---|---|
| 1 | 2.3V |
| 2 | 0V |
| 3 | 1V (3V) |
| 4 | 0V |
| 5 | 0V |
| 6 | 5V |
| 7 | — |
| 8 | 0V |

### IC 2002

| Pin | |
|---|---|
| 1 | 2V |
| 2 | 5V |
| 3 | 2.3V |
| 4 | 0V |

### TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q2000 | 0V (3V) | 0V (2.4V) | 0V |
| Q2001 | 2.5V | 3.2V | 3.7V |
| Q2004 | 2.4V | 0V (3.1V) | 5V |
| Q2006 | 0V | 0V (5V) | 0.7V (0V) |

## MIC-AMP

### IC 350

| Pin | | Pin | |
|---|---|---|---|
| 1 | 1.8V | 8 | — |
| 2 | 0V | 9 | 0V |
| 3 | — | 10 | 1.8V |
| 4 | 0V | 11 | — |
| 5 | 4.8V | 12 | — |
| 6 | — | 13 | — |
| 7 | 1.8V | 14 | — |

### TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Q350 | 0V | 0V | 0.6V | 0V | 0.6V |

## AUDIO

### TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Q301 | 0V | 0V | 0.7V(-15.2V) | 0V (-6V) | 0.7 (-15.5V) |

### TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q320 | 0V | 0V | 0V (4.5V) |
| Q3A0 | 0V | 0V | 0V |
| Q3A1 | 0V | 0V | 0V |

### IC 300

| Pin | | Pin | |
|---|---|---|---|
| 1 | 2.5V | 17 | 0V |
| 2 | 2.5V | 18 | 3.1V |
| 3 | — | 19 | — |
| 4 | 2.5V | 20 | — |
| 5 | 0V | 21 | — |
| 6 | — | 22 | 0V |
| 7 | 0V | 23 | 0V |
| 8 | 0.1V | 24 | 2V |
| 9 | 2.5V | 25 | 0V |
| 10 | 0.2V (5V) | 26 | 2V |
| 11 | 0V (5V) | 27 | 5V |
| 12 | 2.5V | 28 | 2V |
| 13 | 4.4V (0V) | 29 | 5V |
| 14 | 2.5V | 30 | 2V |
| 15 | 0V | 31 | 2.5V |
| 16 | 0V | 32 | 2.5V |

### IC 3A0

| Pin | | Pin | | Pin | | Pin | |
|---|---|---|---|---|---|---|---|
| 1 | 2.3V | 17 | 2.5V | 33 | 0V | 49 | 2.3V |
| 2 | 3.3V | 18 | 2.5V | 34 | 5V | 50 | 0.2V (2V) |
| 3 | 2.5V | 19 | 2.5V | 35 | 2.5V | 51 | 3.1V (4.3V) |
| 4 | 2.5V | 20 | 0V | 36 | 2.5V | 52 | 0V (5V) |
| 5 | 2.5V | 21 | 2.5V | 37 | 2.5V | 53 | 0V |
| 6 | 0.5V | 22 | 2.5V | 38 | 2.5V | 54 | 2.7V (3.2V) |
| 7 | 1.8V | 23 | — | 39 | 2.5V | 55 | 3.4V (0V) |
| 8 | 0V | 24 | 2.5V | 40 | 2.5V | 56 | 5V |
| 9 | 2.5V | 25 | 5V | 41 | 0V | 57 | 3.2V |
| 10 | 2.5V | 26 | — | 42 | 1.8V | 58 | 0V |
| 11 | 2.5V | 27 | 2.5V | 43 | 0.5V | 59 | 2V (4.1V) |
| 12 | 2.5V | 28 | 5V | 44 | 2.5V | 60 | ~ |
| 13 | 2.5V | 29 | 0V | 45 | 2.5V | 61 | 0V |
| 14 | 2.5V | 30 | 0V | 46 | 2.5V | 62 | OV |
| 15 | — | 31 | 2.5V | 47 | 0V | 63 | 3.1V (4.4V) |
| 16 | 0.6V | 32 | 2.5V | 48 | 3.3V | 64 | 0.1V (2V) |

## CONTROL

### IC 401

| Pin | |
|---|---|
| 1 | 2.5v |
| 2 | 2.5v |
| 3 | 2.4v |
| 4 | 5v |
| 5 | 2.5v |
| 6 | 2.5v |
| 7 | 2.6v |
| 8 | 1.5v |
| 9 | 2.4v |
| 10 | 2.4v |
| 11 | 0v |
| 12 | 1.6v |
| 13 | 1.5v |
| 14 | 1.5v |

### IC 5D0

| Pin | |
|---|---|
| 1 | 0V |
| 2 | — |
| 3 | — |
| 4 | 0.2V |
| 5 | 4.6V |
| 6 | — |
| 7 | 0V |
| 8 | — |
| 9 | 0V |
| 10 | — |
| 11 | 5V |
| 12 | — |
| 13 | 0.3V |
| 14 | — |
| 15 | 6.5V |
| 16 | — |

### IC 5A1

| Pin | |
|---|---|
| 1 | 5V |
| 2 | 5V |
| 3 | 0V |

### IC 5A2

| Pin | |
|---|---|
| 1 | 1.2V |
| 2 | 0V |
| 3 | 5.7V |

### IC 5A0

| Pin | | Pin | | Pin | | Pin | |
|---|---|---|---|---|---|---|---|
| 1 | 0V | 21 | 5V | 41 | 2.6V (0V) | 61 | 2.5V |
| 2 | 0V | 22 | 0V | 42 | 5V (0V) | 62 | 2~3V (2.4V) |
| 3 | ~ (0V) | 23 | ~ | 43 | ~ | 63 | 0.7V (0V) |
| 4 | 4.2V (1V) | 24 | ~ | 44 | 0V | 64 | 0V |
| 5 | ~ | 25 | 0~0.4V | 45 | 0V | 65 | 0V (5V) |
| 6 | 2~3V | 26 | 5V | 46 | 5V | 66 | 0~0.4V |
| 7 | ~ | 27 | 0V | 47 | 0V | 67 | 0V |
| 8 | ~ | 28 | 5V | 48 | 4.4V | 68 | 0V (5V) |
| 9 | 2.5V (~) | 29 | 2.1V | 49 | 0~0.4V | 69 | 0V |
| 10 | — | 30 | 1.1V (1.8V) | 50 | — | 70 | 0V |
| 11 | — | 31 | — | 51 | 2~3V | 71 | 0~0.7V |
| 12 | 5V | 32 | 0V | 52 | ~ | 72 | 0V |
| 13 | 5V | 33 | 0.1V (5V) | 53 | 5V | 73 | 5V |
| 14 | ~ | 34 | 5V (0.1V) | 54 | 5V | 74 | 5V |
| 15 | 0V | 35 | 4.4V (0V) | 55 | 0V | 75 | 5V |
| 16 | ~ | 36 | 4.4V | 56 | 0V | 76 | 4.8V |
| 17 | 5V (0V) | 37 | 0~0.4V | 57 | 0~0.4V | 77 | 0~0.4V (0V) |
| 18 | 0V (5V) | 38 | 0.5V (0V) | 58 | 2~3V | 78 | 5V |
| 19 | 5V | 39 | 0V (5V) | 59 | 2.5V | 79 | ~ |
| 20 | 5V | 40 | 3.5 (0V) | 60 | 2.5V | 80 | ~ |

### TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Q402 | ~ | 2~3V | 1~2V | 0V | ~ |

### TRANSISTOR

| SYMBOL | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Q404 | 2~3V | 1~2V | 5V | 5V | 1~2V | 0V |

### TRANSISTOR

| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q406 | 0V | 5V | 0V |
| Q407 | 2.5V (~) | 4.3V (~) | 2.5V (~) |
| Q5A0 | 5V | 0V | 4.6V |
| Q5A1 | 0~0.5V | 0~0.5V | 6.5V |
| Q5A2 | 6.5V | 5.8V | 5V |
| Q5A4 | 0V | 0.6V | 0V |

## POWER / MDA

IC 4B0

| Pin | |
|---|---|
| 1 | 5V |
| 2 | 0V |
| 3 | 2.5V |
| 4 | 2.5V |
| 5 | 2.5V |
| 6 | 1.5V |
| 7 | 1V |
| 8 | 1.5V |
| 9 | 1.2V |
| 10 | 4.4V |
| 11 | 2.3V |
| 12 | 1.2V |
| 13 | 1.9V |
| 14 | 1.3V |
| 15 | 0V |
| 16 | 1.3V |
| 17 | 4.1V |
| 18 | 1.3V |
| 19 | 2.2V |
| 20 | 2.1V |
| 21 | 0.7V |
| 22 | 0.7V |
| 23 | 3.5V |
| 24 | 3.5V |
| 25 | 4.4V |
| 26 | 2.5V |
| 27 | 2.5V |
| 28 | 2.5V |
| 29 | 0.2V |
| 30 | 1~2V |

IC 4D0

| Pin | |
|---|---|
| 1 | 0V |
| 2 | 0V |
| 3 | — |
| 4 | 0~3V |
| 5 | 0~3V |
| 6 | 0~3V |
| 7 | 0V |
| 8 | 2.5V |
| 9 | 6.5V |
| 10 | 5V |
| 11 | 5V |
| 12 | — |
| 13 | — |
| 14 | 0V |
| 15 | 0V |
| 16 | 0V |
| 17 | 0V |
| 18 | 1.4V |
| 19 | 0V |
| 20 | 4.4V |
| 21 | 2V |
| 22 | 0.9V |
| 23 | 1.7V |
| 24 | 1.7V |
| 25 | 1.7V |
| 26 | 1.7V |
| 27 | 1.7V |
| 28 | 1.7V |
| 29 | 0V |
| 30 | 0V |

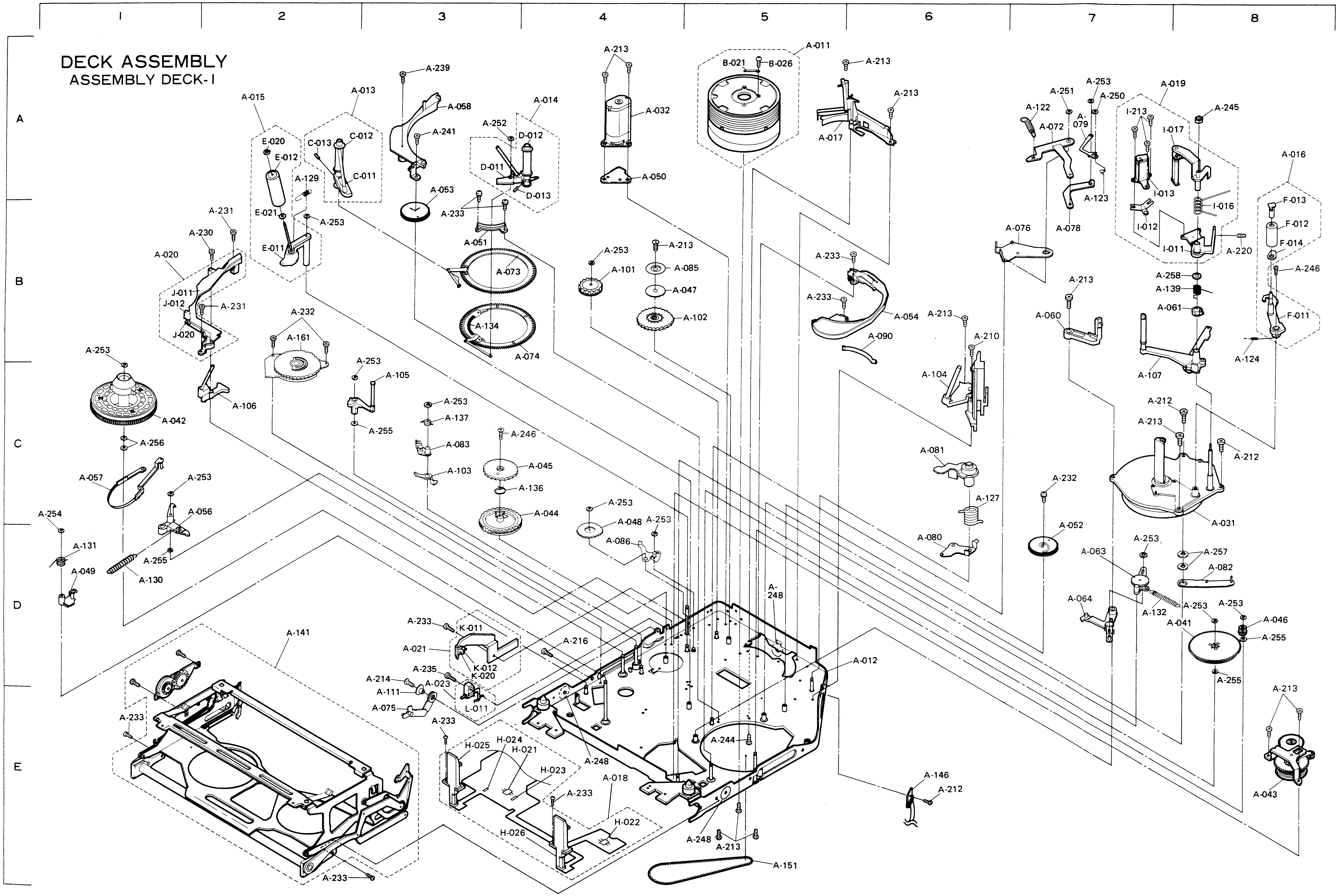
IC 902

| Pin | |
|---|---|
| 1 | 2.5V |
| 2 | 1.6V |
| 3 | 1.2V |
| 4 | 1.2V |
| 5 | 1.2V |
| 6 | 1.5V |
| 7 | 2.5V |
| 8 | 3.7V |
| 9 | 0V |
| 10 | 4.6V |
| 11 | 1.7V |
| 12 | 1.5V |
| 13 | 1.2V |
| 14 | 0V |
| 15 | 5V |
| 16 | 2.5V |
| 17 | 1.4V |
| 18 | 1.2V |
| 19 | 4.9V |
| 20 | 6.5V |

TRANSISTOR

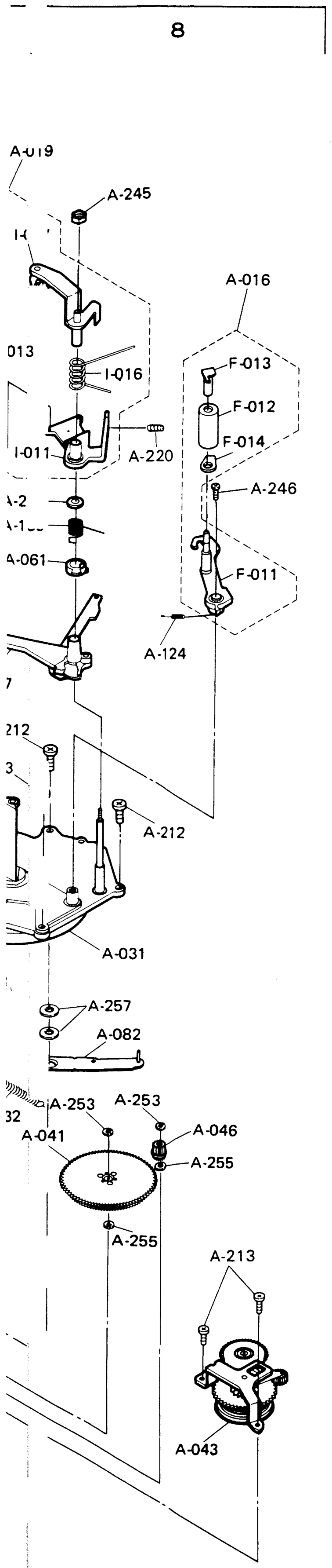
| SYMBOL | (E) | (B) | (C) |
|---|---|---|---|
| Q904 | 6.5V | 6.1V | 2.6V |
| Q905 | 6.5V | 6V | 4.1V |
| Q906 | 6.5V | 6.2V | 0V |

# DECK ASSEMBLY
## ASSEMBLY DECK-1


1
2
3
4
5
6
7
8
A
B
C
D
E
A-015
E-020
E-012
A-129
E-021
A-253
E-011
A-013
C-013
C-012
C-011
A-239
A-058
A-241
A-053
A-233
A-014
A-252
D-012
D-011
D-013
A-051
A-073
A-134
A-074
A-213
A-032
A-050
A-011
B-021
B-026
A-213
A-213
A-017
A-231
A-230
A-020
J-011
J-012
A-231
J-020
A-232
A-161
A-253
A-105
A-255
A-253
A-137
A-083
A-103
A-246
A-045
A-136
A-044
A-253
A-101
A-213
A-085
A-047
A-102
A-233
A-233
A-054
A-090
A-253
A-042
A-106
A-256
A-057
A-253
A-056
A-254
A-131
A-255
A-130
A-049
A-253
A-048
A-086
A-253
A-248
A-141
A-233
K-011
A-021
K-012
K-020
A-216
A-214
A-235
A-111
A-023
A-075
L-011
A-233
A-233
H-025
H-024
H-021
H-023
A-233
A-018
H-022
H-026
A-233
A-248
A-244
A-248
A-213
A-151
A-012
A-146
A-212
A-122
A-251
A-253
A-250
A-072
A-079
A-123
A-078
A-076
A-019
I-213
I-017
A-245
I-013
I-016
I-012
I-011
A-220
A-213
A-060
A-258
A-139
A-061
A-107
A-016
F-013
F-012
F-014
A-246
F-011
A-124
A-213
A-210
A-104
A-081
A-127
A-080
A-212
A-213
A-212
A-031
A-232
A-052
A-253
A-063
A-257
A-082
A-064
A-132
A-253
A-041
A-253
A-046
A-255
A-255
A-213
A-043

* Set

| ITEM |
|---|
| A-011<br>B-021<br>B-026 |
| A-012 |
| A-013<br>C-011<br>C-012<br>C-013 |
| A-014<br>D-011<br>D-012<br>D-013 |
| A-015<br>E-011<br>E-012<br>E-020<br>E-021 |
| A-016<br>F-011<br>F-012<br>F-013<br>F-014 |
| A-017 |
| A-018<br>H-021<br>H-022<br>H-023<br>H-024<br>H-025<br>H-026 |
| A-019<br>I-011<br>I-012<br>I-013<br>I-016<br>I-017<br>I-213 |
| A-020<br>J-011<br>J-012<br>J-020 |
| A-021<br>K-011<br>K-012<br>K-020 |
| A-023<br>L-011 |
| A-031<br>A-032<br>A-041<br>A-042<br>A-043<br>A-044<br>A-045<br>A-046 |



＊Settelled Service Parts

| ITEM | PARTS No. | ＊ | ADDRESS |  | PARTS NAME | DESCRIPTION | Qt. |
|---|---|---|---|---|---|---|---|
| A-011 | 948B279006 | ○ | A-5 |  | ASSY-DRUM |  | 01 |
| B-021 | 299C028010 | ○ | A-5 |  | BRUSH |  | 01 |
| B-026 | 669D315020 |  | A-5 |  | SCREW | (M1. 7X0. 35-2) | 01 |
| A-012 | 948B280002 |  | D-6 |  | ASSY-PLATE-MAIN |  | 01 |
| A-013 | 948D029001 | ○ | A-3 |  | ASSY-TAPE-GUIDE-S |  | 01 |
| C-011 | 635B069010 | ○ | A-3 |  | TAPE-GUIDE-SP |  | 01 |
| C-012 | 522B050010 | ○ | A-3 |  | GUIDE-ROLLER-U2 |  | 01 |
| C-013 | 669D419010 |  | A-2 |  | SET-SCREW | (M1. 4X0. 3) | 01 |
| A-014 | 948D030001 | ○ | A-4 |  | ASSY-TAPE-GUIDE-T |  | 01 |
| D-011 | 635B070010 | ○ | A-3 |  | TAPE-GUIDE-T |  | 01 |
| D-012 | 522B047010 | ○ | A-4 |  | GUIDE-ROLLER |  | 01 |
| D-013 | 669D419010 |  | A-4 |  | SET-SCREW | (M1. 4X0. 3) | 01 |
| A-015 | 948D031001 | ○ | A-2 |  | ASSY-IMP-ROLLER |  | 01 |
| E-011 | 641B443010 |  | B-2 |  | ARM-IMP |  | 01 |
| E-012 | 631D266010 |  | A-2 |  | ROLLER-IMP |  | 01 |
| E-020 | 552C009020 | ○ | A-2 |  | CUT-WASHER |  | 01 |
| E-021 | 552C001010 | ○ | B-2 |  | WASHER-THRUST |  | 01 |
| A-016 | 948D032001 | ○ | A-8 |  | ASSY-PINCH-ROLLER |  | 01 |
| F-011 | 591B706010 |  | B-8 |  | ARM-PINCH |  | 01 |
| F-012 | 522C086010 | ○ | B-8 |  | PINCH-ROLLER |  | 01 |
| F-013 | 641C995010 |  | B-8 |  | CAP-PINCH |  | 01 |
| F-014 | 621D801010 |  | B-8 |  | CAM-L-GR |  | 01 |
| A-017 | 948D033001 | ○ | A-5 |  | ASSY-STOPPER-TG |  | 01 |
| A-018 | 928C729001 | ○ | E-4 |  | ASSY-FPC-SENS |  | 01 |
| H-021 | 268P044020 | ○ | E-3 |  | PHOTO-INTERRUPTER | (Q571 ON2270. MI) | 01 |
| H-022 | 268P044020 | ○ | E-4 |  | PHOTO-INTERRUPTER | (Q572 ON2270. MI) | 01 |
| H-023 | 103P352020 | ○ | E-4 |  | CHIP METAL RESISTOR | (R571 1/8W 560Ω) | 01 |
| H-024 | 103P359050 | ○ | E-3 |  | CHIP METAL RESISTOR | (R572 1/8W 0Ω) | 01 |
| H-025 | 439P027010 | ○ | E-3 |  | SW-LEAF | (SW571) | 01 |
| H-026 | 439P027010 | ○ | E-4 |  | SW-LEAF | (SW572) | 01 |
| A-019 | 928C730001 | ○ | A-8 |  | ASSY-A/C-HEAD |  | 01 |
| I-011 | 593C082010 |  | B-8 |  | PLATE-AC |  | 01 |
| I-012 | 572D451010 |  | B-7 |  | SPRING-PLATE-AC |  | 01 |
| I-013 | 460P103020 | ○ | A-7 |  | HEAD-AC | (T571) | 01 |
| I-016 | 572D453010 |  | B-8 |  | SPRING-ARM-AC |  | 01 |
| I-017 | 596D532010 |  | A-8 |  | LEVER-GR |  | 01 |
| I-213 | 669D420040 |  | A-7 |  | SCREW | (M1. 7X0. 35X3) | 03 |
| A-020 | 928D039002 | ○ | B-1 |  | ASSY-GUIDE-SLIDER |  | 01 |
| J-011 | 641B431010 |  | B-1 |  | GUIDE-SLIDER-L |  | 01 |
| J-012 | 641C999010 |  | B-1 |  | HOLDER-LED |  | 01 |
| J-020 | 264P526010 | ○ | B-1 |  | DIODE-LE | (D571 LN-57) | 01 |
| A-021 | 928D040002 | ○ | D-3 |  | ASSY-E-SENS |  | 01 |
| K-011 | 641B457010 |  | D-3 |  | HOLDER-E-SENS |  | 01 |
| K-012 | 621D770010 |  | D-3 |  | COVER-E-SENS |  | 01 |
| K-020 | 268P041010 | ○ | D-3 |  | PHOTO-TRANSISTOR | (Q573 PN147) | 01 |
| A-023 | 928D046001 | ○ | A-6 |  | ASSY-SW-C |  | 01 |
| L-011 | 439P013020 | ○ | E-3 |  | SW-LIMIT | (SW573) | 01 |
| A-031 | 288P103020 | ○ | C-8 |  | MOTOR-CP | (M571) | 01 |
| A-032 | 288P105020 | ○ | A-4 |  | MOTOR-LOADING | (M572) | 01 |
| A-041 | 522B044010 | ○ | D-8 |  | GEAR-REEL |  | 01 |
| A-042 | 522B045010 | ○ | C-1 |  | REEL-DISK |  | 01 |
| A-043 | 522B046020 | ○ | E-8 |  | UNIT-IDLER |  | 01 |
| A-044 | 621C021010 | ○ | C-4 |  | CAM-S |  | 01 |
| A-045 | 621C022010 | ○ | C-4 |  | CAM-S-SP |  | 01 |
| A-046 | 621D711010 | ○ | D-8 |  | GEAR-TU1 |  | 01 |

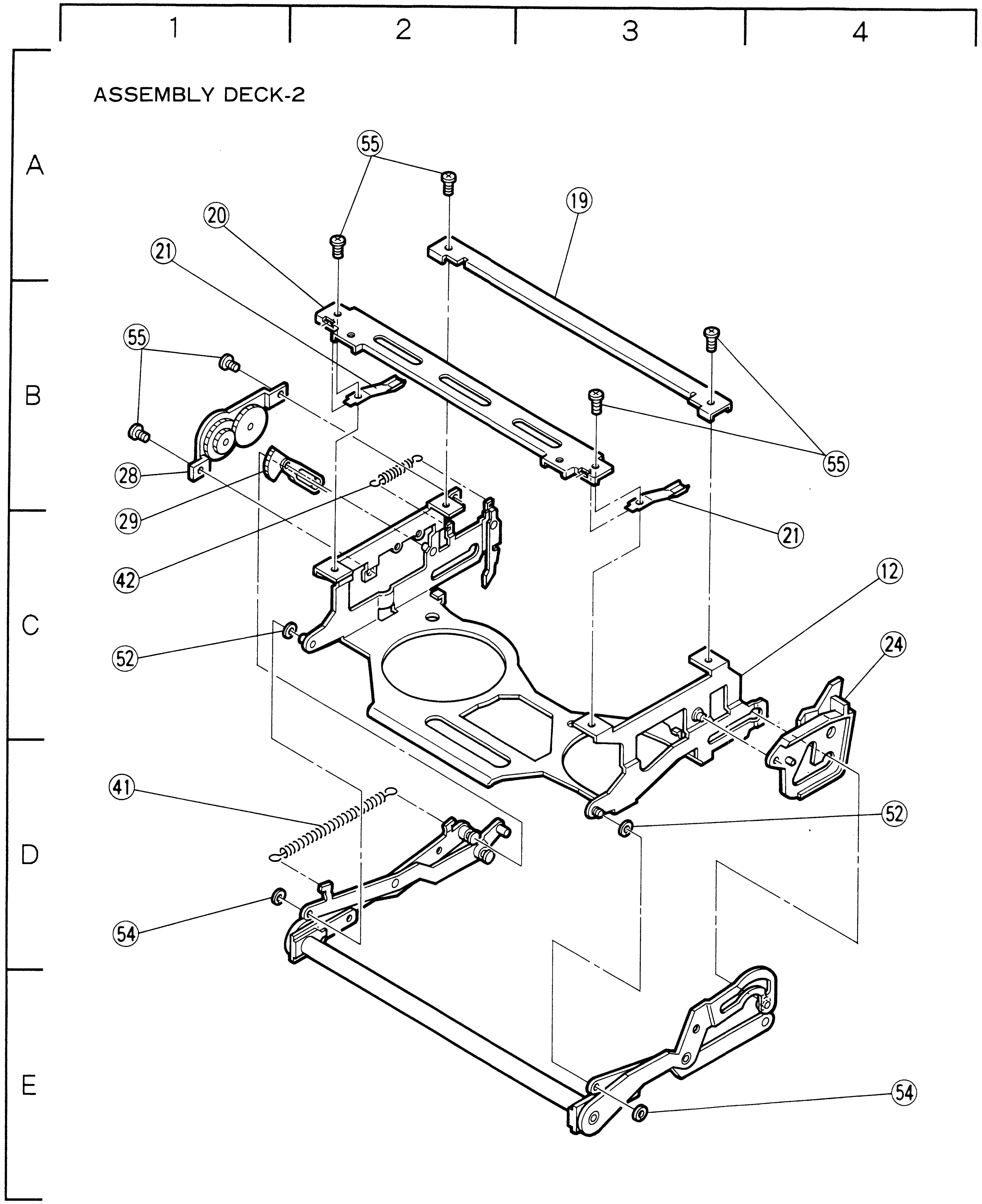
＊Settelled Service Parts

| ITEM | PARTS No. | ＊ | ADDRESS |  | PARTS NAME | DESCRIPTION | Qt. |
|---|---|---|---|---|---|---|---|
| A-047 | 621D718010 | ○ | B-5 |  | GEAR-GUIDE |  | 01 |
| A-048 | 621D721010 | ○ | C-4 |  | GEAR-LOAD-S |  | 01 |
| A-049 | 621D727010 |  | D-1 |  | HOLDER-TENS |  | 01 |
| A-050 | 621D728010 |  | A-4 |  | HOLDER-L-MO |  | 01 |
| A-051 | 621C068010 |  | B-3 |  | RING-GUIDE-SP |  | 01 |
| A-052 | 641B428020 | ○ | C-7 |  | CAM-T |  | 01 |
| A-053 | 641B429010 | ○ | A-3 |  | CAM-M |  | 01 |
| A-054 | 641B432010 |  | B-6 |  | GUIDE-SLIDER-T |  | 01 |
| A-056 | 621C090010 | ○ | C-2 |  | ARM-REGULATOR |  | 01 |
| A-057 | 641B437010 | ○ | C-1 |  | BELT-TENS |  | 01 |
| A-058 | 641B438010 |  | A-3 |  | GUIDE-SLIDER-R |  | 01 |
| A-060 | 621C156010 |  | B-7 |  | HOLDER-CP-CAS |  | 01 |
| A-061 | 641C984010 | ○ | B-8 |  | CAM-GEAR-TUG |  | 01 |
| A-063 | 522C088010 | ○ | D-8 |  | UNIT-CLUCH-2 |  | 01 |
| A-064 | 593C199010 |  | D-7 |  | PLATE-CLUTCH-OFF2 |  | 01 |
| A-072 | 591B705010 |  | A-7 |  | LEVER-PINCH-B |  | 01 |
| A-073 | 591B709010 | ○ | B-3 |  | UNIT-RING-S |  | 01 |
| A-074 | 591B710010 | ○ | B-4 |  | UNIT-RING-TU |  | 01 |
| A-075 | 591B711010 |  | E-3 |  | ARM-EJECT |  | 01 |
| A-076 | 593C011010 |  | B-7 |  | LEVER-PINCH-A |  | 01 |
| A-078 | 593C012010 |  | B-7 |  | LINK-PINCH-A |  | 01 |
| A-079 | 593C013010 |  | A-7 |  | LINK-PINCH-B |  | 01 |
| A-080 | 593C216010 |  | D-6 |  | LEVER-ROCK-T-A2 |  | 01 |
| A-081 | 593C217010 |  | C-6 |  | LEVER-LOCK-T-B2 |  | 01 |
| A-082 | 593C016010 |  | D-7 |  | LEVER-CAM-T |  | 01 |
| A-083 | 593C022010 |  | C-3 |  | SET-ARM-S |  | 01 |
| A-085 | 596D384010 | ○ | B-5 |  | STOPPER-RING-S |  | 01 |
| A-086 | 593C066010 |  | D-4 |  | LEVER-EJECT |  | 01 |
| A-090 | 596D445010 |  | B-6 |  | PLATE-SLIDER-T |  | 01 |
| A-101 | 635D065010 | ○ | B-4 |  | GEAR-IDLER-S |  | 01 |
| A-102 | 520D161010 | ○ | B-5 |  | GEAR-LOAD-1 |  | 01 |
| A-103 | 635D067010 |  | C-3 |  | LEVER-TENS-OFF |  | 01 |
| A-104 | 641B538010 | ○ | C-6 |  | SLANT-T |  | 01 |
| A-105 | 641B499010 | ○ | C-3 |  | TENS-REGULATOR |  | 01 |
| A-106 | 641B531010 | ○ | C-2 |  | SLANT-SP |  | 01 |
| A-107 | 635B074020 | ○ | C-7 |  | GUIDE-ARM-TU |  | 01 |
| A-111 | 631D290010 |  | E-3 |  | SLEEVE-EJECT |  | 01 |
| A-122 | 572D454010 | ○ | A-7 |  | SPRING-PINCH |  | 01 |
| A-123 | 572D455010 |  | A-7 |  | SPRING-PINCH-SUB |  | 01 |
| A-124 | 572D456010 |  | B-8 |  | SPRING-ARM-PINCH |  | 01 |
| A-127 | 572D541010 | ○ | C-6 |  | SPRING-ARM-LOCK2 |  | 01 |
| A-129 | 572D461010 |  | A-2 |  | SPRING-IMP |  | 01 |
| A-130 | 572D462010 | ○ | D-1 |  | SPRING-TENS-1 |  | 01 |
| A-131 | 572D463010 | ○ | D-1 |  | SPRING-TENS-2 |  | 01 |
| A-132 | 572D542010 |  | E-8 |  | SPRING-RS2 |  | 01 |
| A-134 | 572D465010 |  | B-3 |  | SPRING-F |  | 01 |
| A-136 | 572D537010 |  | C-4 |  | SPRING-PUSH |  | 01 |
| A-137 | 572D468010 |  | C-3 |  | SPRING-PUSH2 |  | 01 |
| A-139 | 572D516010 | ○ | B-8 |  | SPRING-G |  | 01 |
| A-141 | 591B712020 | ○ | D-2 |  | UNIT-C-HOU-U |  | 01 |
| A-146 | 299P168010 | ○ | E-6 |  | SENSOR-H | (Z571) | 01 |
| A-151 | 521D072010 | ○ | E-5 |  | BELT-SYNC |  | 01 |
| A-161 | 439P026010 | ○ | B-2 |  | SW-MODE | (SW574) | 01 |
| A-210 | 669D420010 |  | B-6 |  | SCREW | (M1. 7X0. 35X10) | 01 |
| A-212 | 669D420020 |  | C-7 | C-8 | SCREW | (M1. 7X0. 35X2) | 03 |
|  |  |  | E-6 |  |  |  |  |
| A-213 | 669D420040 |  | A-4 | A-6 | SCREW | (M1. 7X0. 35X3) | 13 |
|  |  |  | B-4 | B-6 |  |  |  |
|  |  |  | B-7 | C-7 |  |  |  |
|  |  |  | E-5 | E-8 |  |  |  |
| A-214 | 669D420050 |  | D-3 |  | SCREW | (M1. 7X0. 35X4) | 01 |
| A-216 | 669D420070 |  | D-4 |  | SCREW | (M1. 7X0. 35X6) | 01 |
| A-220 | 669D405010 | ○ | B-8 |  | SCREW | (M1. 7X0. 35X3) | 01 |
| A-230 | 669D421010 |  | B-2 |  | SCREW | (M1. 7X0. 35X10) | 01 |
| A-231 | 669D421030 |  | B-2 |  | SCREW | (M1. 7X0. 35X2. 5) | 02 |
| A-232 | 669D421020 |  | B-2 | C-7 | SCREW | (M1. 7X0. 35X2) | 03 |

＊Settelled Service Parts

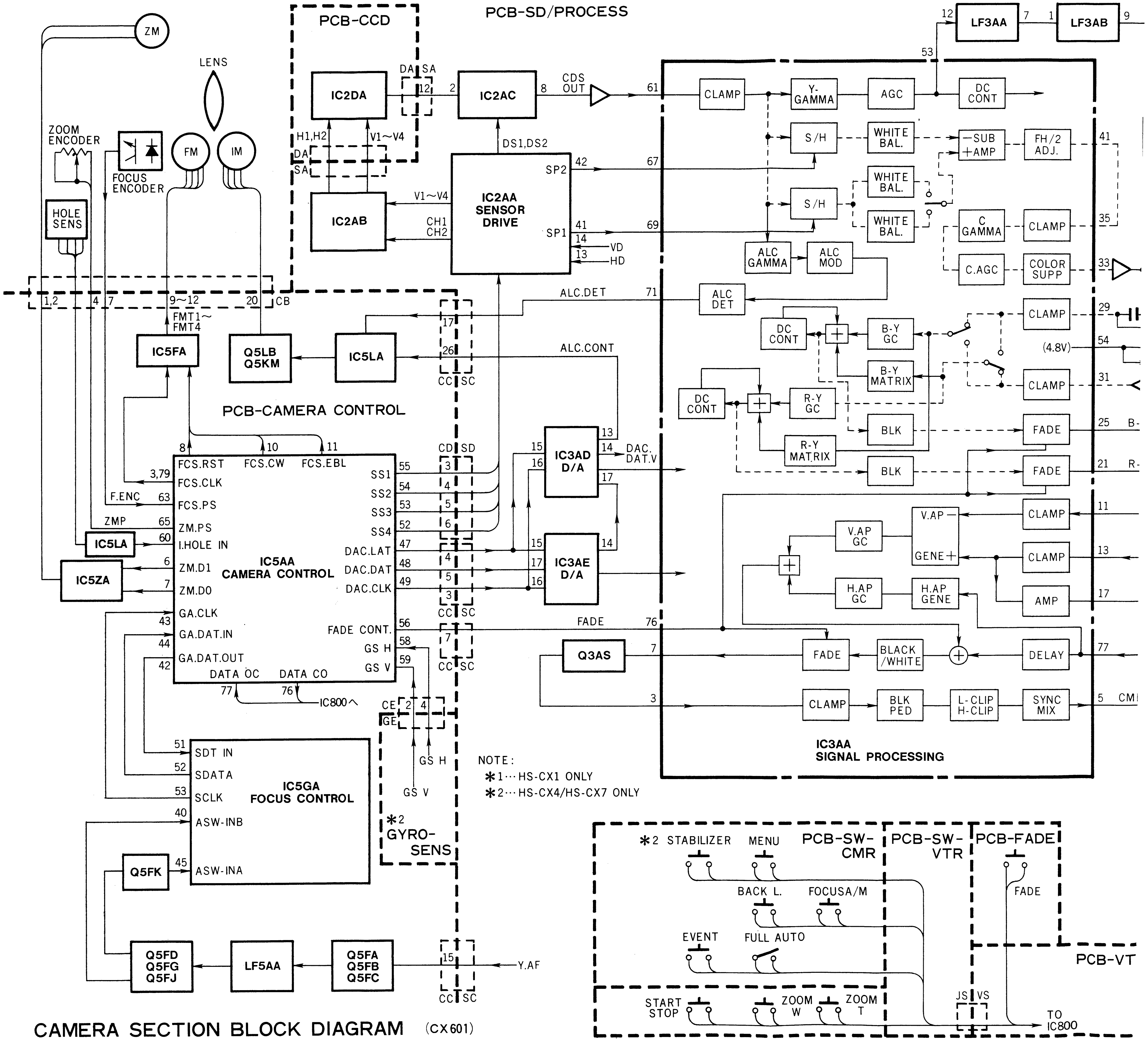
| ITEM | PARTS No. | ＊ | ADDRESS |  | PARTS NAME | DESCRIPTION | Qt. |
|---|---|---|---|---|---|---|---|
| A-233 | 669D421040 |  | B-3 | B-5 | SCREW | (M1. 7X0. 35X3) | 09 |
|  |  |  | D-3 | E-1 |  |  |  |
|  |  |  | E-2 | E-3 |  |  |  |
|  |  |  | E-4 |  |  |  |  |
| A-235 | 669D421060 |  | D-3 |  | SCREW | (M1. 7X0. 35X5) | 01 |
| A-239 | 669D421090 |  | A-3 |  | SCREW | (M1. 7X0. 35X9) | 01 |
| A-241 | 669D344020 |  | A-3 |  | SCREW-FLANGE | (M1. 7X0. 35-2) | 01 |
| A-244 | 669D423060 |  | E-5 |  | SCREW | (M1. 4X0. 3 L=3. 5) | 01 |
| A-245 | 674D093010 |  | A-8 |  | NUT-S | (M2X0. 4) | 01 |
| A-246 | 669D443010 |  | B-8 | C-3 | SCREW | (M1. 7X0. 35X3) | 02 |
| A-248 | 223D506010 |  | D-4 | E-4 | SPACER |  | 03 |
|  |  |  | E-5 |  |  |  |  |
| A-250 | 552C016010 |  | A-7 |  | WASHER |  | 01 |
| A-251 | 552C007010 | ○ | A-7 |  | CUT-WASHER |  | 01 |
| A-252 | 552C009010 | ○ | A-3 |  | CUT-WASHER |  | 01 |
| A-253 | 552C009020 | ○ | A-7 | B-1 | CUT-WASHER |  | 12 |
|  |  |  | B-2 | B-3 |  |  |  |
|  |  |  | B-4 | C-2 |  |  |  |
|  |  |  | C-3 | C-4 |  |  |  |
|  |  |  | D-8 |  |  |  |  |
| A-254 | 552C009040 | ○ | C-1 |  | CUT-WASHER |  | 01 |
| A-255 | 552C001010 | ○ | C-3 |  | WASHER-THRUST |  | 04 |
|  |  |  | D-1 | D-8 |  |  |  |
| A-256 | 552C006010 | ○ | C-1 |  | WASHER-THRUST |  | 02 |
| A-257 | 552C014010 |  | D-7 |  | WASHER-THRUST |  | 02 |
| A-258 | 683D120010 |  | B-8 |  | WASHER-AC |  | 01 |

## ASSEMBLY DECK-2


1
2
3
4
A
B
C
D
E
55
20
19
21
55
28
29
42
55
21
12
24
52
52
41
54
54

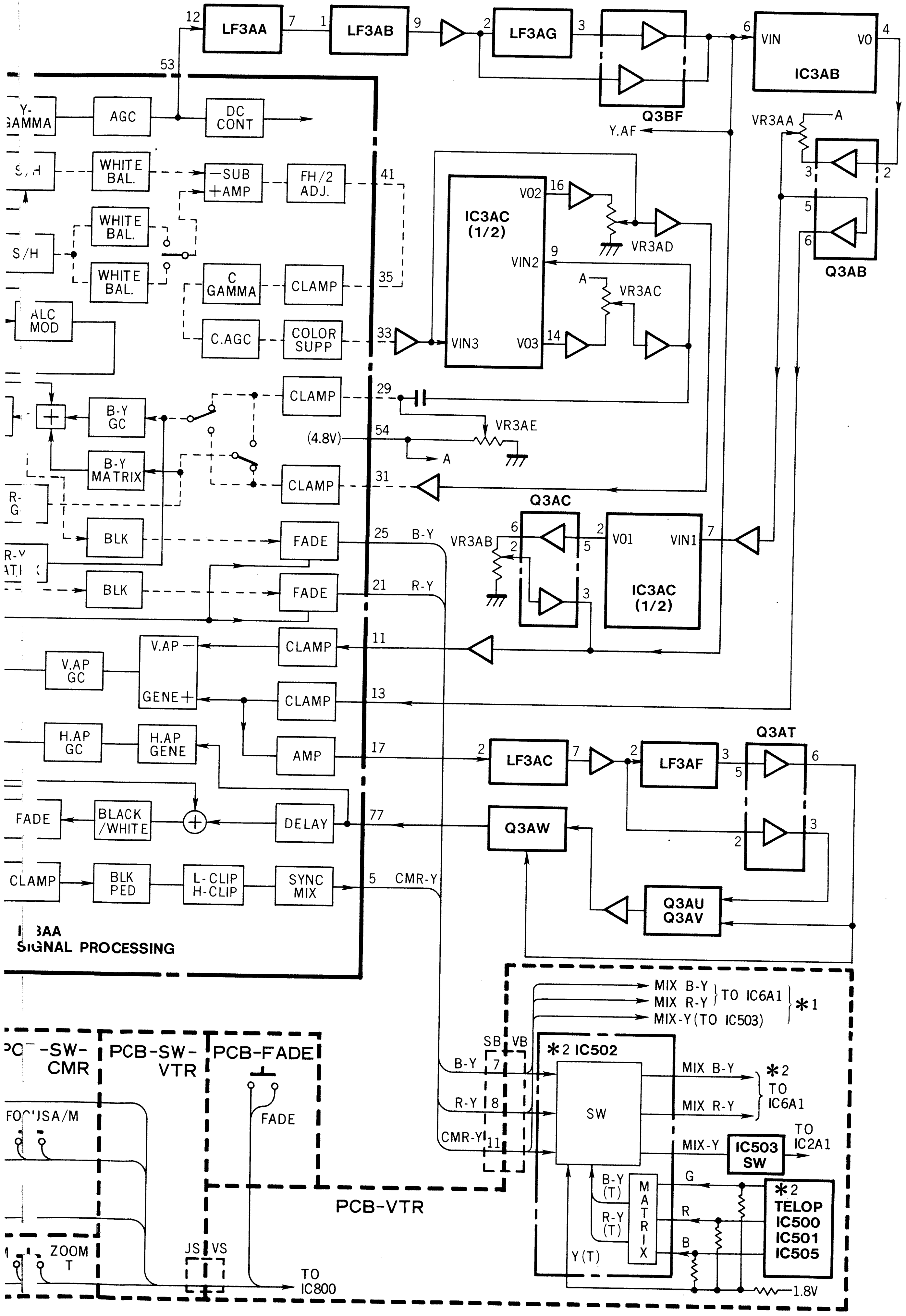
* Settelled Service Parts

| ITEM | PARTS No. | * | ADDRESS | | PARTS NAME | DESCRIPTION | Qt. |
|---|---|---|---|---|---|---|---|
| 12 | 591B716020 | | C-4 | | BOTTOM-HOU-U | | 01 |
| 19 | 596D396010 | | A-3 | | PLATE-TOP-D | | 01 |
| 20 | 596D397010 | | A-1 | | PLATE-TOP-C | | 01 |
| 21 | 596D398010 | | A-1 | C-4 | PLATE-HOLD | | 02 |
| 28 | 621C049010 | | B-1 | | UNIT-DANPER | | 01 |
| 29 | 621D792010 | ○ | C-1 | | LEVER-DANPER | | 01 |
| 41 | 572D473010 | ○ | D-1 | | SPRING-LIFT | | 01 |
| 42 | 572D472010 | ○ | C-1 | | SPRING-HOOK | | 01 |
| 52 | ---------- | | C-1 | D-4 | WASHER THRUST | | 02 |
| 54 | ---------- | | D-1 | E-4 | CUT-WASHER | | 02 |
| 55 | ---------- | | A-2<br>B-4 | B-1 | SCREW | M1.7 | 06 |


ZM
LENS
ZOOM ENCODER
FOCUS ENCODER
FM
IM
HOLE SENS
PCB-CCD
IC2DA
IC2AB
H1,H2
V1~V4
DA SA
12
PCB-SD/PROCESS
IC2AC
CDS OUT
IC2AA SENSOR DRIVE
DS1,DS2
SP2
SP1
CH1 CH2
VD
HD
ALC.DET
ALC.CONT
1,2
4
7
9~12
20
CB
FMT1~FMT4
IC5FA
Q5LB Q5KM
IC5LA
CC SC
CD SD
PCB-CAMERA CONTROL
IC5AA CAMERA CONTROL
FCS.RST
FCS.CW
FCS.EBL
FCS.CLK
FCS.PS
ZM.PS
I.HOLE IN
ZM.D1
ZM.D0
GA.CLK
GA.DAT.IN
GA.DAT.OUT
DATA OC
DATA CO
SS1
SS2
SS3
SS4
DAC.LAT
DAC.DAT
DAC.CLK
FADE CONT.
GS H
GS V
F.ENC
ZMP
IC5LA
IC5ZA
IC800へ
CE GE
IC3AD D/A
IC3AE D/A
DAC. DAT.V
FADE
Q3AS
IC5GA FOCUS CONTROL
SDT IN
SDATA
SCLK
ASW-INB
ASW-INA
Q5FK
Q5FD Q5FG Q5FJ
LF5AA
Q5FA Q5FB Q5FC
Y.AF
*2 GYRO-SENS
LF3AA
LF3AB
CLAMP
Y-GAMMA
AGC
DC CONT
S/H
WHITE BAL.
-SUB +AMP
FH/2 ADJ.
C GAMMA
C.AGC
COLOR SUPP
ALC GAMMA
ALC MOD
ALC DET
B-Y GC
B-Y MATRIX
R-Y GC
R-Y MATRIX
BLK
FADE
(4.8V)
V.AP GC
V.AP-
GENE+
H.AP GC
H.AP GENE
AMP
BLACK /WHITE
DELAY
BLK PED
L-CLIP H-CLIP
SYNC MIX
IC3AA SIGNAL PROCESSING
B-
R-
CMI
PCB-SW-CMR
*2 STABILIZER
MENU
BACK L.
FOCUSA/M
EVENT
FULL AUTO
START STOP
ZOOM W
ZOOM T
PCB-SW-VTR
PCB-FADE
FADE
PCB-VT
JS VS
TO IC800

NOTE:
*1···HS-CX1 ONLY
*2···HS-CX4/HS-CX7 ONLY

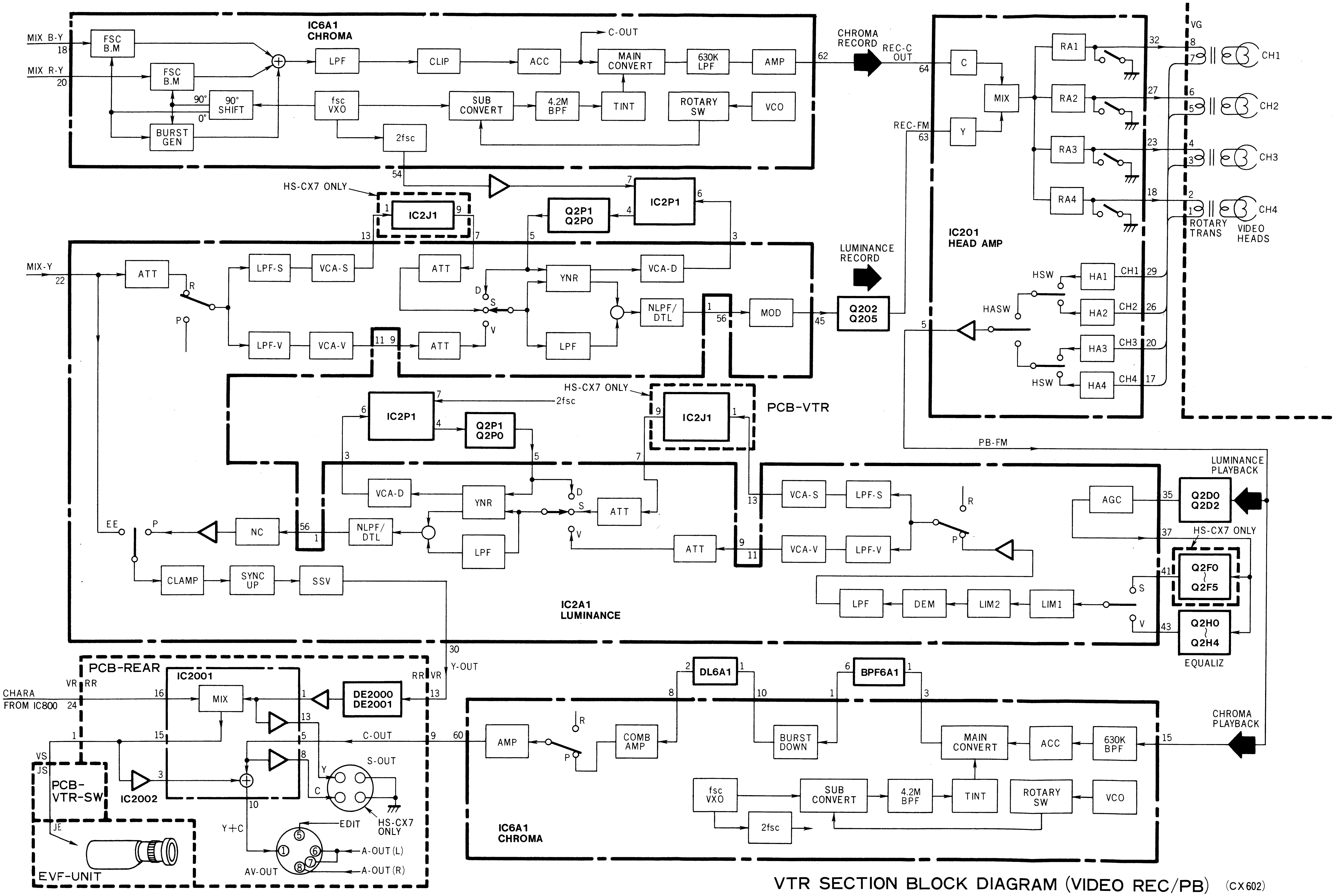
CAMERA SECTION BLOCK DIAGRAM (CX601)


LF3AA
LF3AB
LF3AG
Q3BF
Y.AF
VIN
VO
IC3AB
VR3AA
Q3AB
AGC
DC CONT
WHITE BAL.
−SUB +AMP
FH/2 ADJ.
S/H
C GAMMA
CLAMP
C.AGC
COLOR SUPP
ALC MOD
IC3AC (1/2)
VO2
VIN2
VIN3
VO3
VR3AD
VR3AC
B-Y GC
B-Y MATRIX
(4.8V)
VR3AE
Q3AC
VR3AB
VO1
VIN1
BLK
FADE
B-Y
R-Y
V.AP GC
V.AP
GENE
H.AP GC
H.AP GENE
AMP
LF3AC
LF3AF
Q3AT
BLACK /WHITE
DELAY
Q3AW
Q3AU Q3AV
BLK PED
L-CLIP H-CLIP
SYNC MIX
CMR-Y
3AA SIGNAL PROCESSING
MIX B-Y
MIX R-Y
TO IC6A1
*1
MIX-Y (TO IC503)
SB
VB
*2 IC502
SW
*2 TO IC6A1
MIX-Y
IC503 SW
TO IC2A1
MATRIX
*2 TELOP IC500 IC501 IC505
Y(T)
1.8V
-SW- CMR
PCB-SW- VTR
PCB-FADE
FOCUS A/M
ZOOM T
JS
VS
TO IC800
PCB-VTR

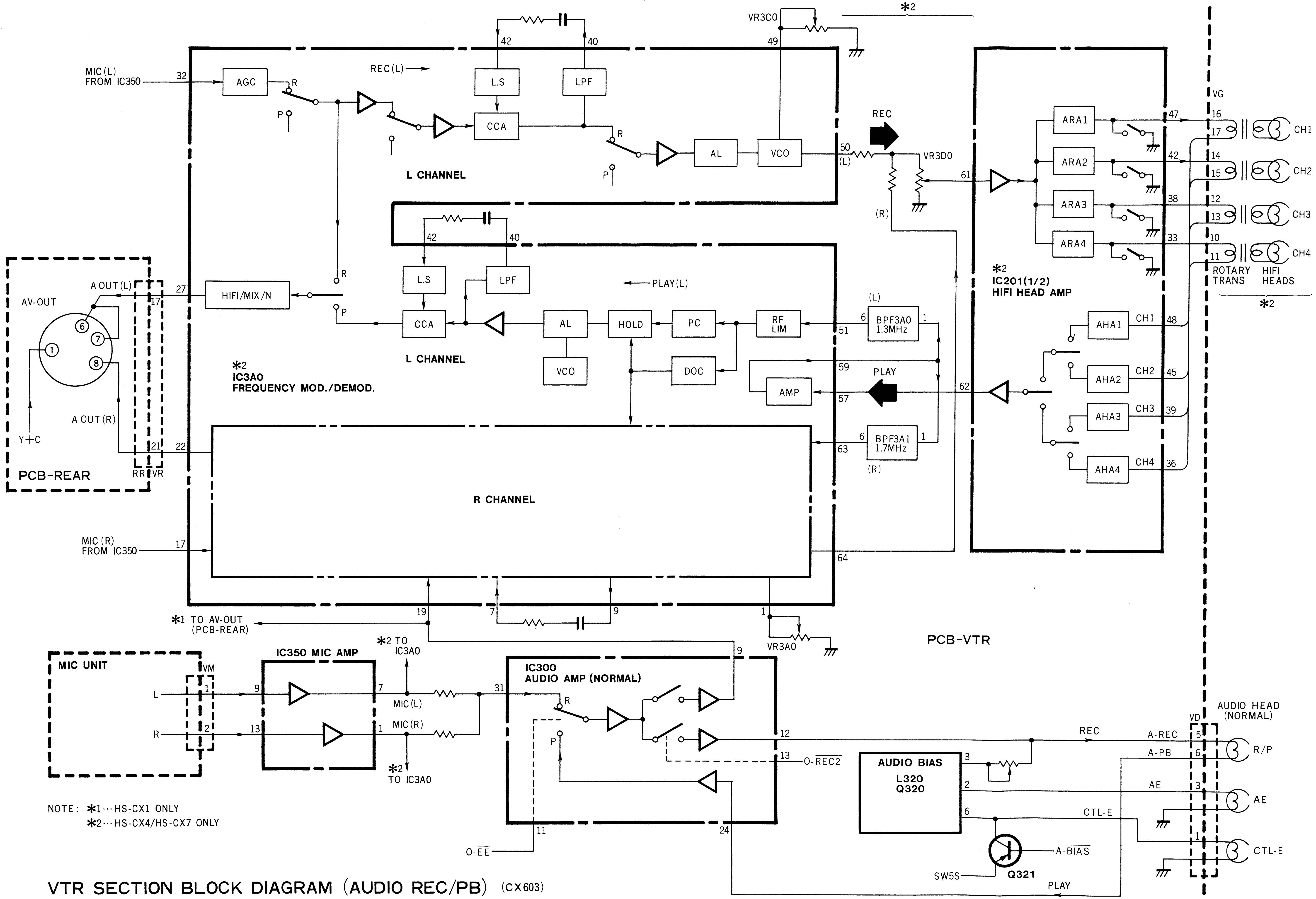
## CAMERA CONTROL μ COMPUTER FUNCTION (IC 5AA)

| PIN NO. | NAME | I/O | FUNCTION |
|---|---|---|---|
| 2 | LTR-BLK | O | Letter Box blanking pulse |
| 3 | FCS.CLK | O | Focus Lens drive pulse |
| 4 | $\overline{\text{P.DET}}$ | O | Special effect switch signal in Ski mode |
| 5 | ZM.SPD | O | Zoom speed control signal, high speed at "H" . |
| 6 | ZM.D1 | O | Zoom Lens is driven in the direction of "TELE" . |
| 7 | ZM.D0 | O | Zoom Lens is driven in the direction of "WIDE" . |
| 8 | FCS.RST | O | fixed at "H" . |
| 10 | FCS.CW | O | Focus Lens is driven in the direction of "∞" at "H" . |
| 11 | FCS.EBL | O | Focus motor power is saved at "H" . |
| 12 | ALC.CNTL | O | Iris control signal |
| 13 | 27/$\overline{36}$ | I | jumper lead input to select Picture Element number of CCD. |
| 14 | $\overline{\text{RST.FL}}$ | O | "L" output for about 400 μsec synchronized with VD. |
| 15 | DL.PWR | O | Signal to rise 9V power supply |
| 16 | PAL/$\overline{\text{NTSC}}$ | I | jumper lead input to select PAL or NTSC. |
| 17 | S.STRB | I | Strobe signal input from operational microcomputer. |
| 18 | HD | I | H sync signal |
| 19 | VD | I | V sync signal |
| 25 | CNVSS | — | GND |
| 26 | $\overline{\text{RST}}$ | I | "L" input when μ computor is reset. |
| 28 | XIN | I | System Clock input |
| 32 | VSS | — | GND |
| 33 | LED.ON | O | "L" output to light LED for center detection |
| 35 | GA.HLSB | O | Stabilizer horizontal address data |
| 36 | SEL.1MFIL | O | Signal to select IMHz or 600kHz (1MHZ at "H" ) |
| 37 | FCS.AREA | O | Signal to select Focus Area (fixed at "L") |
| 38 | HF.ENABL | O | Signal to select Stabilizer ON or OFF. |
| 39 | GA.STRB | O | Strobe signal output to IC 5GA |
| 40 | GA.READY | I | Ready signal input from IC 5GA |
| 42 | GA.DAT.OUT | O | Stabilizer address data output to IC 5GA |
| 43 | GA.CLK | O | Clock signal output to IC 5GA |
| 44 | GA.DAT.IN | I | Focus Evaluation data input from IC 5GA |
| 45 | E2.DAT.IN | I | Serial data input from EEPROM |
| 46 | E2.LAT | O | Chip select signal to EEPROM |
| 47 | DAC.LAT | O | Chip select signal to D/A converter |
| 48 | DAC.DAT | O | Data to D/A converter and EEPROM |
| 49 | DAC.CLK | O | Serial clock to D/A converter and EEPROM |
| 50 | $\overline{\text{WBLK.DIS}}$ | O | Special effect switch signal in Party mode |

| PIN NO. | NAME | I/O | FUNCTION |
|---|---|---|---|
| 52 | SS4 | O | Shutter speed control signal |
| 53 | SS3 | | |
| 54 | SS2 | | |
| 55 | SS1 | | |
| 56 | B.COMP | I | White balance control input |
| 57 | R.COMP | | |
| 58 | GS-H | I | Signal from Angular velocity sensor |
| 59 | GS-V | | |
| 60 | I.HOLE.IN | I | Signal from Iris sensor |
| 61 | APLX | I | Signal from Y signal integration circuit |
| 62 | APL | | |
| 63 | FCS.PS | I | Signal from Focus encoder. |
| 64 | ZM.PSX4 | I | Signal from Zoom encoder |
| 65 | ZM.PS | | |
| 66 | FADE.CNTL | O | Fader control signal output |
| 67 | FLK.CNTL | O | Flicker compensation signal output |
| 68 | DAVREF | I | Reference voltage input for D/A converter |
| 69 | ADVREF | I | Reference voltage input for A/D converter |
| 70 | AVSS | — | GND for D/A converter and A/D converter |
| 71 | AVCC | I | Power source input for A/D converter |
| 72 | VCC | I | Power source input for μ computer |
| 73 | VSS | — | GND |
| 75 | C.CLK | I | Serial data and clock between this μ computer and operation μ computer. |
| 76 | DATA.CO | O | |
| 77 | DATA.OC | I | |
| 79 | FCS.CLK | O | Focus Lens drive pulse |


IC6A1
CHROMA
MIX B-Y
18
MIX R-Y
20
FSC B.M
FSC B.M
90°
0°
90° SHIFT
BURST GEN
LPF
fsc VXO
2fsc
CLIP
ACC
C-OUT
MAIN CONVERT
630K LPF
AMP
SUB CONVERT
4.2M BPF
TINT
ROTARY SW
VCO
62
54
CHROMA RECORD
REC-C OUT
64
REC-FM
63
C
Y
MIX
RA1
RA2
RA3
RA4
32
27
23
18
VG
8
7
6
5
4
3
2
1
CH1
CH2
CH3
CH4
ROTARY TRANS
VIDEO HEADS
IC201
HEAD AMP
HSW
HASW
HA1
HA2
HA3
HA4
CH1
CH2
CH3
CH4
29
26
20
17
5
HS-CX7 ONLY
IC2J1
1
9
13
7
Q2P1 Q2P0
IC2P1
7
6
4
5
3
MIX-Y
22
ATT
R
P
LPF-S
VCA-S
ATT
D
S
V
YNR
VCA-D
NLPF/ DTL
1
56
MOD
45
LUMINANCE RECORD
Q202 Q205
LPF-V
VCA-V
11 9
ATT
LPF
HS-CX7 ONLY
2fsc
IC2P1
7
6
4
Q2P1 Q2P0
3
5
IC2J1
9
1
7
PCB-VTR
PB-FM
LUMINANCE PLAYBACK
VCA-D
YNR
D
S
V
ATT
EE
P
NC
56
1
NLPF/ DTL
LPF
13
VCA-S
LPF-S
R
P
AGC
35
Q2D0 Q2D2
37
HS-CX7 ONLY
41
Q2F0 ~ Q2F5
ATT
9
11
VCA-V
LPF-V
CLAMP
SYNC UP
SSV
S
V
LPF
DEM
LIM2
LIM1
43
Q2H0 ~ Q2H4
EQUALIZ
IC2A1
LUMINANCE
30
Y-OUT
PCB-REAR
IC2001
CHARA FROM IC800
VR RR
16
24
MIX
1
DE2000 DE2001
RR VR
13
1
15
13
5
8
C-OUT
9
60
VS
JS
PCB-VTR-SW
IC2002
3
10
Y
C
S-OUT
HS-CX7 ONLY
Y+C
EDIT
A-OUT (L)
A-OUT (R)
AV-OUT
1
5
6
7
8
JE
EVF-UNIT
2
DL6A1
1
8
10
6
BPF6A1
1
1
3
AMP
R
P
COMB AMP
BURST DOWN
MAIN CONVERT
ACC
630K BPF
15
CHROMA PLAYBACK
fsc VXO
2fsc
SUB CONVERT
4.2M BPF
TINT
ROTARY SW
VCO
IC6A1
CHROMA

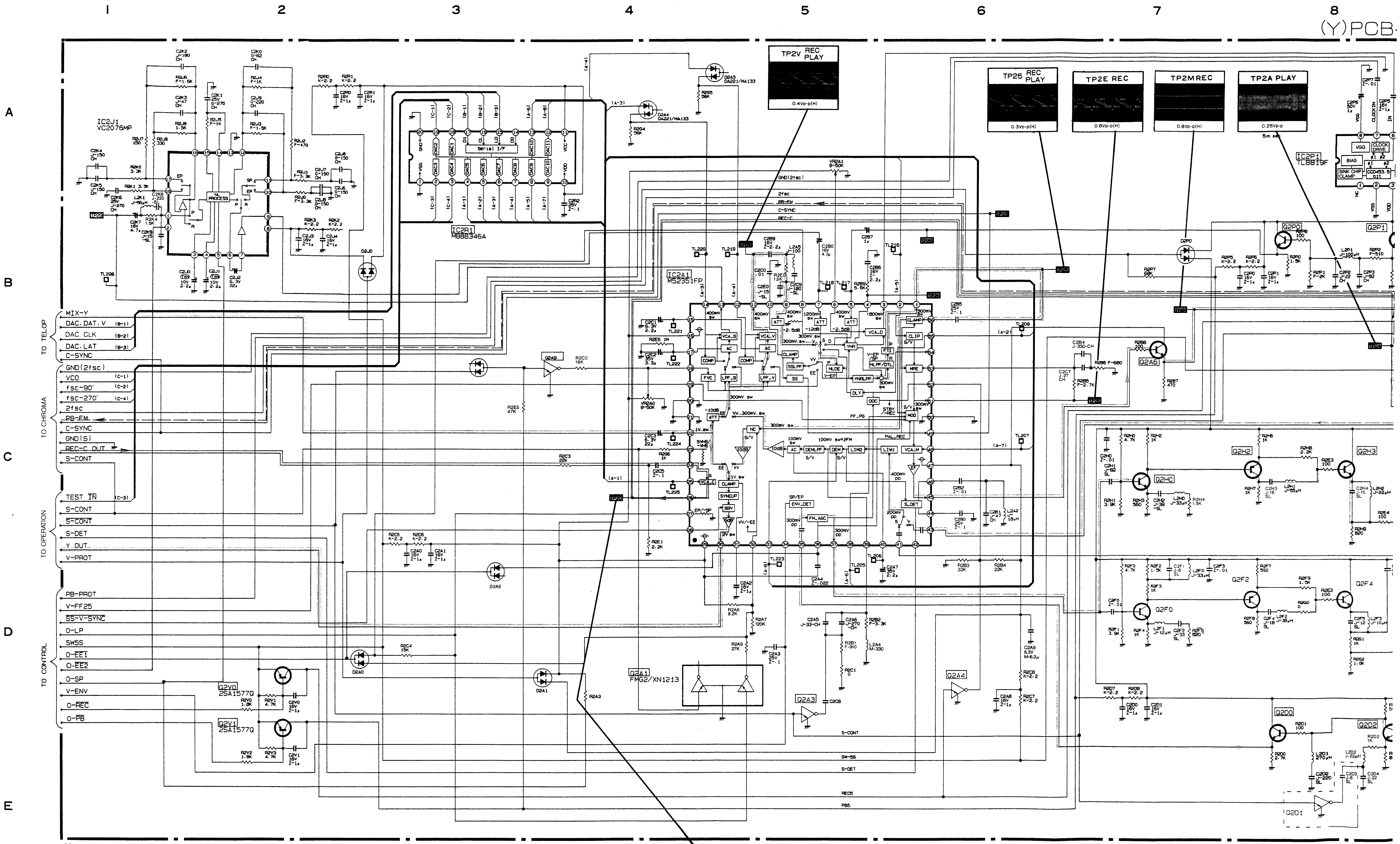
VTR SECTION BLOCK DIAGRAM (VIDEO REC/PB) (CX602)

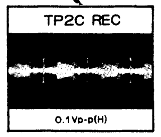

MIC (L) FROM IC350
32
AGC
R
P
REC (L)
42
40
L.S
LPF
CCA
R
P
AL
VCO
VR3C0
49
*2
50 (L)
REC
VR3D0
(R)
61
L CHANNEL
ARA1
ARA2
ARA3
ARA4
47
42
38
33
VG
16
17
14
15
12
13
10
11
CH1
CH2
CH3
CH4
ROTARY TRANS
HIFI HEADS
*2
*2 IC201 (1/2) HIFI HEAD AMP
AHA1
AHA2
AHA3
AHA4
CH1 48
CH2 45
CH3 39
CH4 36
62
PLAY
AMP
57
59
(L)
BPF3A0 1.3MHz
6
1
51
RF LIM
PC
HOLD
AL
VCO
DOC
L.S
LPF
CCA
42
40
PLAY (L)
L CHANNEL
HIFI/MIX/N
27
17
R
P
AV-OUT
A OUT (L)
6
7
1
8
A OUT (R)
Y+C
21
22
RR
VR
PCB-REAR
*2 IC3A0 FREQUENCY MOD./DEMOD.
BPF3A1 1.7MHz
6
1
63
(R)
R CHANNEL
64
MIC (R) FROM IC350
17
19
7
9
1
VR3A0
*1 TO AV-OUT (PCB-REAR)
PCB-VTR
MIC UNIT
VM
L
R
1
2
IC350 MIC AMP
9
13
7
1
MIC (L)
MIC (R)
*2 TO IC3A0
*2 TO IC3A0
31
IC300 AUDIO AMP (NORMAL)
R
P
9
12
13
O-REC2
11
24
O-EE
AUDIO BIAS
L320
Q320
3
2
6
REC
A-REC
A-PB
AE
CTL-E
VD
5
6
3
1
AUDIO HEAD (NORMAL)
R/P
AE
CTL-E
Q321
A-BIAS
SW5S
PLAY

NOTE: *1 ··· HS-CX1 ONLY

*2 ··· HS-CX4/HS-CX7 ONLY

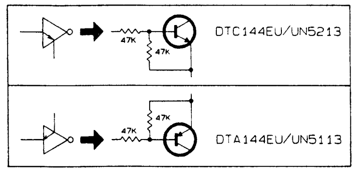
VTR SECTION BLOCK DIAGRAM (AUDIO REC/PB) (CX603)


1
2
3
4
5
6
7
8
(Y)PCB-
A
B
C
D
E
IC2J1
VC2076MP
NL PROCESS
IC2R1
MB88346A
Serial I/F
IC2A1
M52351FP
IC2P1
TL8B19F
Q2A1
FMG2/XN1213
Q2A3
Q2A4
Q2A6
Q2A9
Q2V0
2SA1577Q
Q2V1
2SA1577Q
Q2P0
Q2P1
Q2H2
Q2H3
Q2HC
Q2F0
Q2F2
Q2F4
Q2D0
Q2D1
Q2D2
D2J0
D2A0
D2A1
D2A3
DA221/MA133
D2A4
DA221/MA133
D2A5
D2P0
TP2V REC PLAY
0.4Vp-p(H)
TP25 REC PLAY
0.3Vp-p(H)
TP2E REC
0.8Vp-p(H)
TP2MREC
0.8Vp-p(H)
TP2A PLAY
0.25Vp-p
5m sec
TO TELOP
MIX-Y
DAC.DAT.V (B-1)
DAC.CLK (B-2)
DAC.LAT (B-3)
C-SYNC
GND(2fsc)
TO CHROMA
VCO (C-1)
fsc-90° (C-2)
fsc-270° (C-4)
2fsc
PB-FM
C-SYNC
GND(S)
REC-C OUT
S-CONT
TO OPERATION
TEST IN (C-3)
S-CONT
S-CONT
S-DET
Y OUT
V-PROT
TO CONTROL
PB-PROT
V-FF25
SS-V-SYNC
O-LP
SW5S
O-EE1
O-EE2
O-SP
V-ENV
O-REC
O-PB
S-CONT
SW-5S
S-DET
REC5
PB5
GND(2fsc)
2fsc
PB-FM
C-SYNC
REC-C
VGG
CLOCK DRIVE
BIAS
SINK CHIP CLAMP
CCD453.5 bit
CLOCK IN
VR2A1
B-50K
VR2A0
B-50K



(Y)

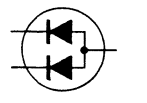
| SYMBOL NO.<br>MODELS | Q2A3 | C2C8 |
|---|---|---|
| HS-CX7 | × | × |

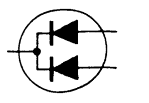

47K
47K
DTC144EU/UN5213
47K
47K
DTA144EU/UN5113

| | | | |
|---|---|---|---|
| A-1 | C-LEV | A-7 | FM-LEV |
| A-2 | DEV | A-8 | PB-LEV |
| A-3 | S-VHS-LEV | C-1 | VCO |
| A-4 | VHS-LEV | C-2 | fsc-90° |
| A-5 | CLIP-LEV | C-3 | TEST IN |
| A-6 | CAR-SET | C-4 | fsc-270° |

NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

- ●PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ●NPN TRANSISTORS ARE 2SC4098-P/2SC3936-B
- ●PNP DIGITAL TRANSISTORS ARE DTA144EU/UN5113
- ●NPN DIGITAL TRANSISTORS ARE DTC144EU/UN5213


DAP202U
MA142WA


DAN202U
MA142WK

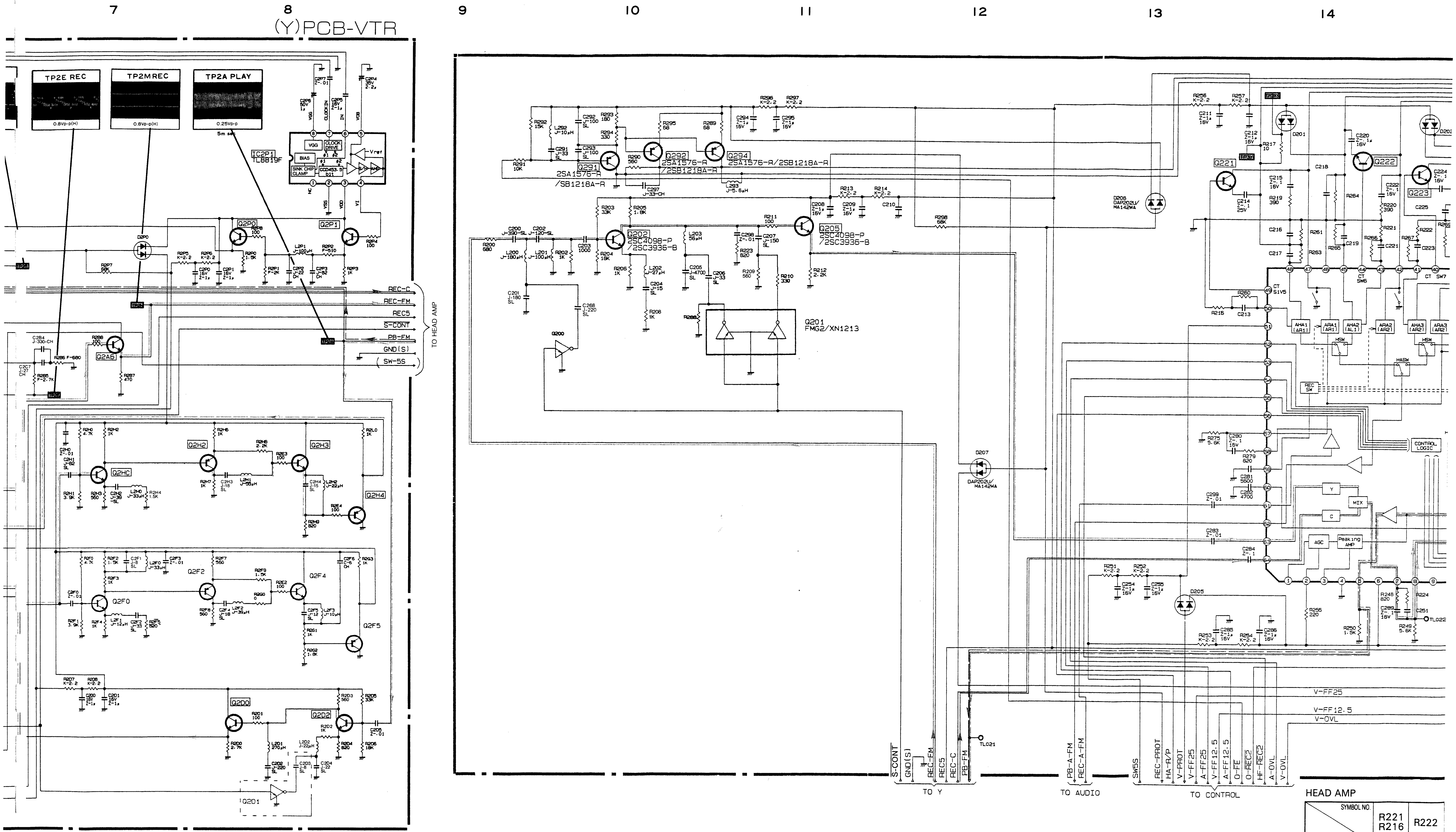
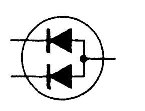
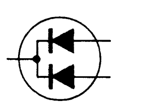

7
8
9
10
11
12
13
14
(Y)PCB-VTR
TP2E REC
TP2MREC
TP2A PLAY
0.8Vp-p(H)
0.8Vp-p(H)
0.25Vp-p
5m sec
IC2P1
TLB819F
VGG
CLOCK DRIVE
BIAS
SINK CHIP CLAMP
CCD453.5 bit
Vref
Q2P0
Q2P1
D2P0
Q2A6
Q2H2
Q2H3
Q2HC
Q2H4
Q2F2
Q2F4
Q2F0
Q2F5
Q2D0
Q2D2
Q2D1
REC-C
REC-FM
REC5
S-CONT
PB-FM
GND(S)
SW-5S
TO HEAD AMP
Q291
2SA1576-R
/SB1218A-R
Q292
2SA1576-R
/2SB1218A-R
Q294
2SA1576-R/2SB1218A-R
Q202
2SC4098-P
/2SC3936-B
Q205
2SC4098-P
/2SC3936-B
Q200
Q201
FMG2/XN1213
D208
DAP202U/
MA142WA
D207
DAP202U/
MA142WA
D205
D201
D202
Q221
Q222
Q223
CT SW7
CT SW6
CT S1V5
AHA1 (AR1)
ARA1 (AR1)
AHA2 (AL1)
ARA2 (AR2)
AHA3 (AR2)
ARA3 (AR2)
HSW
HASW
REC SW
CONTROL LOGIC
Y
C
MIX
AGC
Peaking AMP
TL021
TL022
V-FF25
V-FF12.5
V-OVL
S-CONT
GND(S)
REC-FM
REC5
REC-C
PB-FM
TO Y
PB-A-FM
REC-A-FM
TO AUDIO
SW5S
REC-PROT
HA-R/P
V-PROT
V-FF25
A-FF25
V-FF12.5
A-FF12.5
O-FE
O-REC2
HF-REC2
A-OVL
V-OVL
TO CONTROL

DIAGRAM.
SE 218A-R
SC3936-B
44EU/UN5113
44 /UN5213



DAP202U
MA142WA



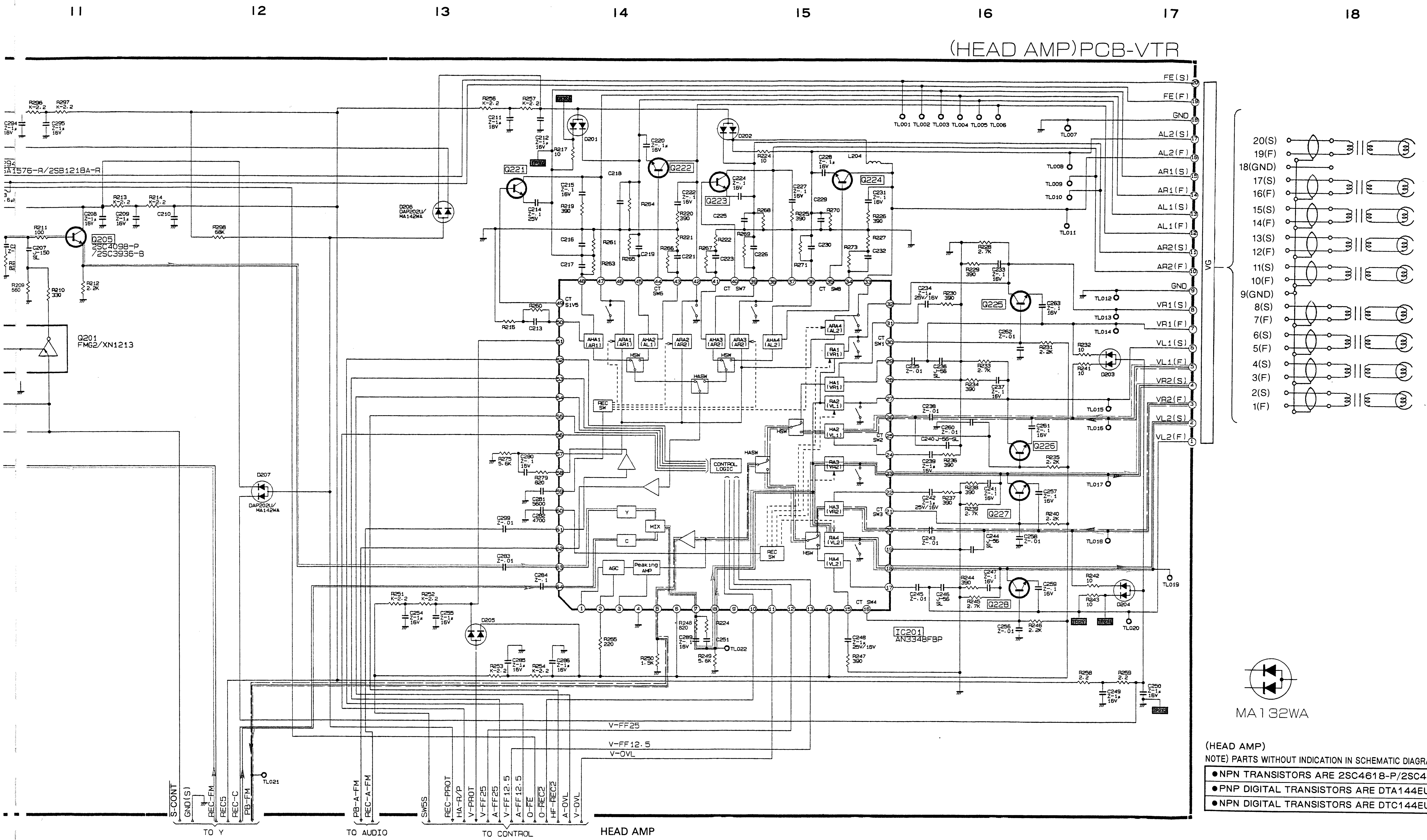
DAN202U
MA142WK

Recording of Luminance Signal
Playback of Luminance Signal
Recording of Color Signal
Playback of Color Signal

HEAD AMP

| SYMBOL NO.<br>MODEL | R221<br>R216 | R222 |
|---|---|---|
| HS-CX7 | 180 | 220 |

## (HEAD AMP)PCB-VTR


11
12
13
14
15
16
17
18
FE(S) 20
FE(F) 19
GND 18
AL2(S) 17
AL2(F) 16
AR1(S) 15
AR1(F) 14
AL1(S) 13
AL1(F) 12
AR2(S) 11
AR2(F) 10
GND 9
VR1(S) 8
VR1(F) 7
VL1(S) 6
VL1(F) 5
VR2(S) 4
VR2(F) 3
VL2(S) 2
VL2(F) 1
VG
20(S)
19(F)
18(GND)
17(S)
16(F)
15(S)
14(F)
13(S)
12(F)
11(S)
10(F)
9(GND)
8(S)
7(F)
6(S)
5(F)
4(S)
3(F)
2(S)
1(F)
Q205 2SC4098-P /2SC3936-B
Q201 FM62/XN1213
2SA1576-R/2SB1218A-R
Q221
Q222
Q223
Q224
Q225
Q226
Q227
Q228
D201
D202
D203
D204
D205
D206 DAP202U/ MA142WA
D207 DAP202U/ MA142WA
IC201 AN3348FBP
CONTROL LOGIC
REC SW
HSW
HASW
AGC
Peaking AMP
Y
C
MIX
TL001 TL002 TL003 TL004 TL005 TL006
TL007
TL008
TL009
TL010
TL011
TL012
TL013
TL014
TL015
TL016
TL017
TL018
TL019
TL020
TL021
TL022
V-FF25
V-FF12.5
V-OVL
S-CONT
GND(S)
REC-FM
REC5
REC-C
PB-FM
TO Y
PB-A-FM
REC-A-FM
TO AUDIO
SW5S
REC-PROT
HA-A/P
V-PROT
V-FF25
A-FF25
V-FF12.5
A-FF12.5
O-FE
O-REC2
HF-REC2
A-OVL
V-OVL
TO CONTROL
MA132WA

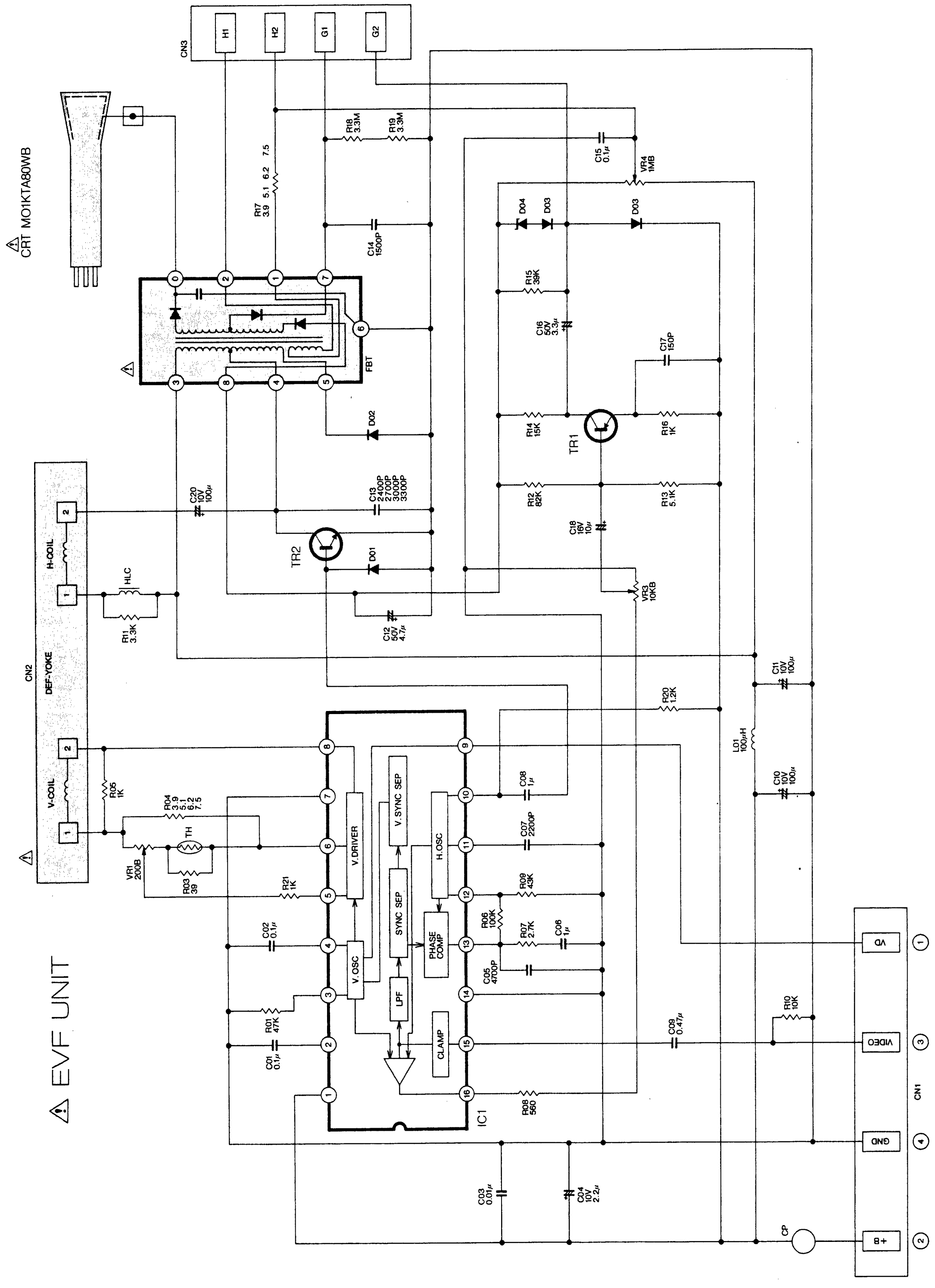
(HEAD AMP)

NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

- ●NPN TRANSISTORS ARE 2SC4618-P/2SC4655-B
- ●PNP DIGITAL TRANSISTORS ARE DTA144EU/UN5113
- ●NPN DIGITAL TRANSISTORS ARE DTC144EU/UN5213

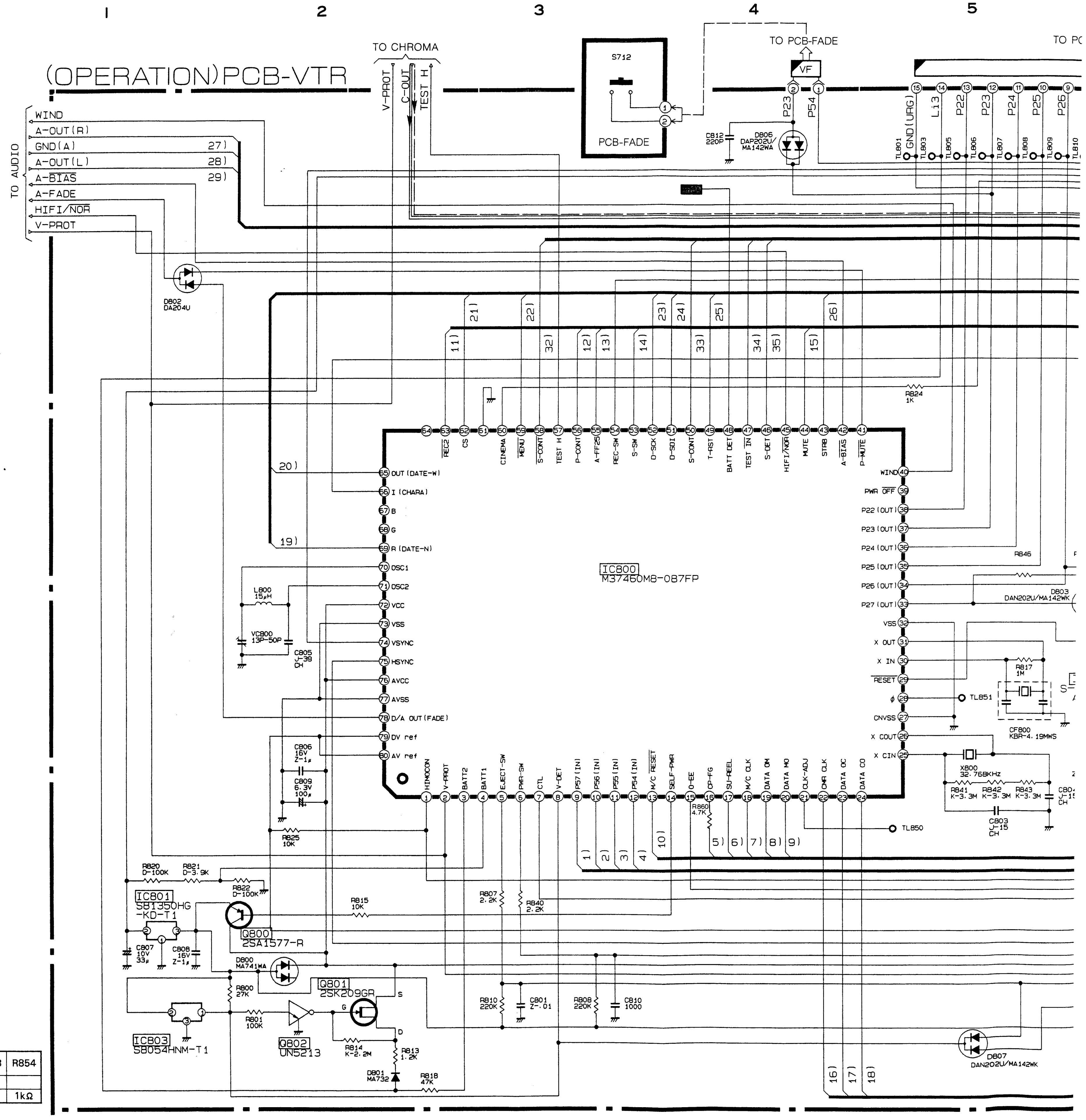
HEAD AMP

| SYMBOL NO.<br>MODEL | R221<br>R216 | R222 | C223<br>C232<br>C213<br>C221 | R263<br>R261<br>R260<br>R273 | R267<br>R266<br>R265<br>R264 | R271<br>R270<br>R269<br>R268 | L204 | C229<br>C225 | C230<br>C217<br>C219<br>C226 | C218<br>C216 | R227 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HS-CX7 | 180 | 220 | Z-1μ | × | × | × | 100μH | J-680 SL | Z-.01 | J-560 SL | 150 |



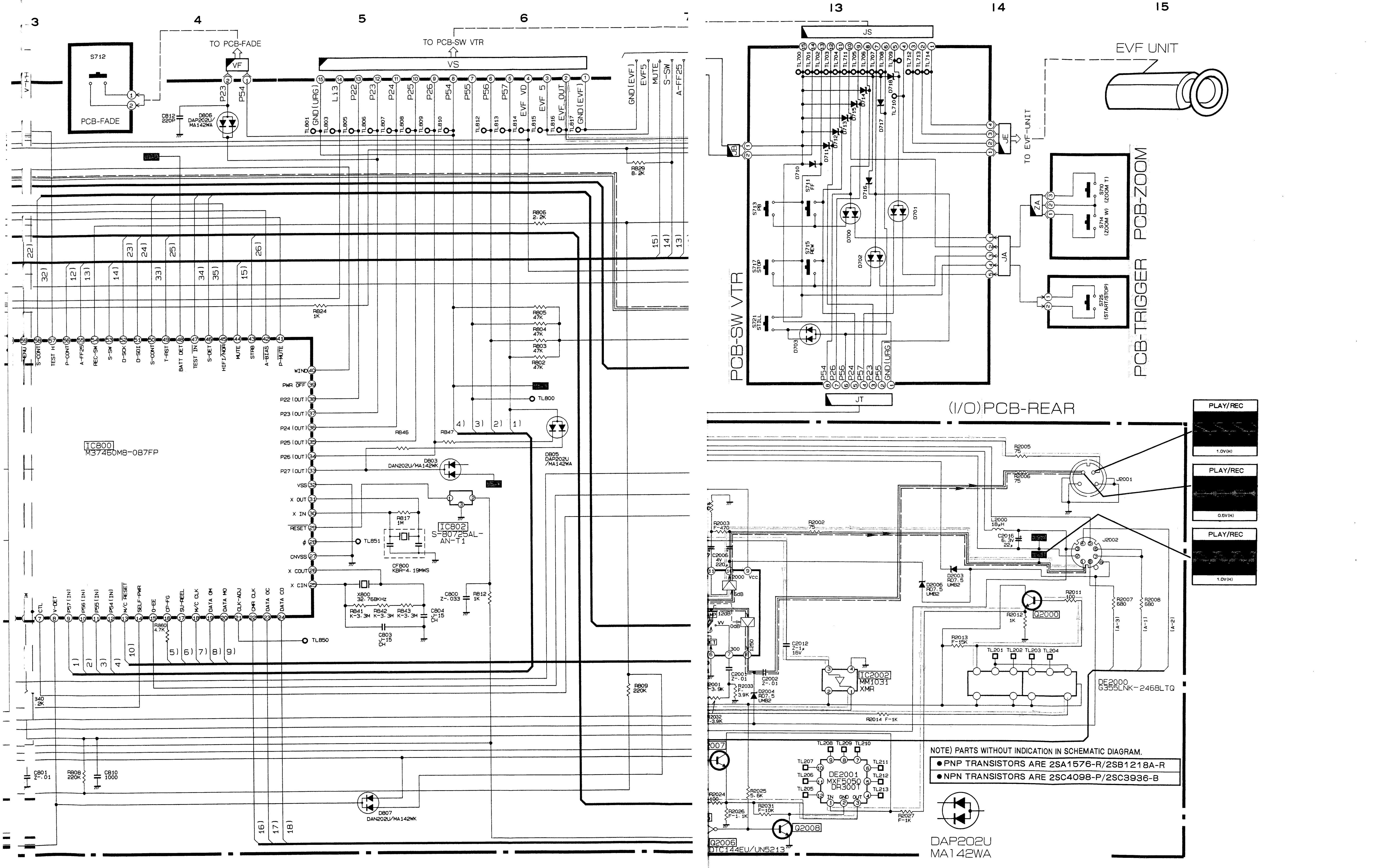
CRT M01KTA80WB
CN3
H1
H2
G1
G2
R18 3.3M
R19 3.3M
R17 3.9 5.1 6.2 7.5
C14 1500P
C15 0.1μ
VR4 1MB
D04
D03
R15 39K
C16 50V 3.3μ
C17 150P
FBT
D02
R14 15K
TR1
R16 1K
R12 82K
R13 5.1K
C20 10V 100μ
C19 2400P 2700P 3300P 3600P
C18 16V 10μ
TR2
D01
VR3 10KB
C12 50V 4.7μ
HLC
R11 3.3K
H-COIL
DEF-YOKE
CN2
V-COIL
R05 1K
R04 3.9 5.1 6.2 7.5
TH
VR5 200B
R03 39
R21 1K
C02 0.1μ
R01 47K
C01 0.1μ
V.DRIVER
V.SYNC SEP
H.OSC
SYNC SEP
PHASE COMP
V.OSC
LPF
CLAMP
IC1
R20 12K
L01 100μH
C11 10V 100μ
C10 10V 100μ
C09 1μ
C07 2200P
R02 43K
R06 100K
R07 2.7K
C08 1μ
C05 4700P
C06 0.47μ
R10 10K
R08 560
C03 0.01μ
C04 16V 2.2μ
CP
CN1
VD
VIDEO
GND
B+

EVF UNIT



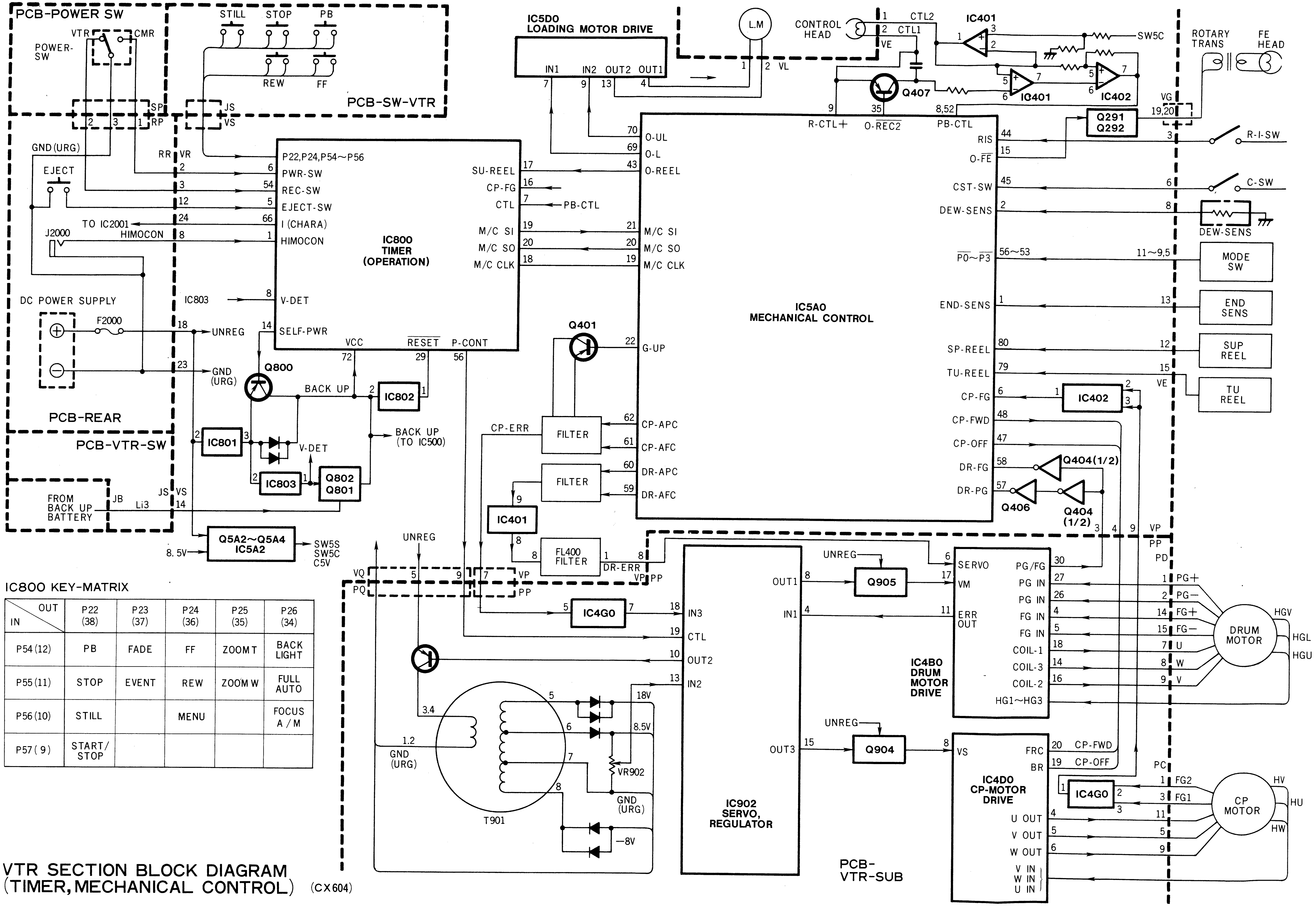
1
2
3
4
5
A
B
C
D
E
(OPERATION)PCB-VTR
TO CHROMA
V-PROT
C-OUT
TEST H
S712
PCB-FADE
TO PCB-FADE
VF
P23
P54
C812 220P
D806 DAP202U/MA142WA
TO PC
GND(URG)
Li3
P22
P23
P24
P25
P26
TL801
TL803
TL805
TL806
TL807
TL808
TL809
TL810
TO AUDIO
WIND
A-OUT(R)
GND(A)
A-OUT(L)
A-BIAS
A-FADE
HIFI/NOR
V-PROT
27)
28)
29)
D802 DA204U
R824 1K
IC800
M37460M8-087FP
OUT(DATE-W)
I(CHARA)
B
G
R(DATE-N)
OSC1
OSC2
VCC
VSS
VSYNC
HSYNC
AVCC
AVSS
D/A OUT(FADE)
DV ref
AV ref
REC2
CS
CINEMA
MENU
S-CONT
TEST H
P-CONT
A-FF25
REC-SW
S-SW
D-SCK
D-SDI
S-CONT
T-RST
BATT DET
TEST IN
S-DET
HIFI/NOR
MUTE
STRB
A-BIAS
P-MUTE
WIND
PWR OFF
P22(OUT)
P23(OUT)
P24(OUT)
P25(OUT)
P26(OUT)
P27(OUT)
VSS
X OUT
X IN
RESET
φ
CNVSS
X COUT
X CIN
HIMOCON
V-PROT
BATT2
BATT1
EJECT-SW
PWR-SW
CTL
V-DET
P57(IN)
P56(IN)
P55(IN)
P54(IN)
M/C RESET
SELF-PWR
D-EE
CP-FG
SU-REEL
M/C CLK
DATA OM
DATA MO
CLK-ADJ
CMR CLK
DATA OC
DATA CO
L800 15μH
VC800 13P-50P
C805 CH 39
C806 16V Z-1μ
C809 6.3V 100μ
R825 10K
R846
D803 DAN202U/MA142WK
R817 1M
TL851
CF800 KBR-4.19MWS
X800 32.768KHz
R841 K-3.3M
R842 K-3.3M
R843 K-3.3M
C803 CH 15
R860 4.7K
TL850
R820 D-100K
R821 D-3.9K
R822 D-100K
IC801
S81350HG -KD-T1
Q800
2SA1577-R
R815 10K
C807 10V 33μ
C808 16V Z-1μ
D800 MA741WA
R800 27K
Q801
2SK209GR
R801 100K
IC803
S8054HNM-T1
Q802
UN5213
R814 K-2.2M
R813 1.2K
D801 MA732
R818 47K
R807 2.2K
R840 2.2K
R810 220K
C801 Z-.01
R808 220K
C810 1000
D807 DAN202U/MA142WK
G
S
D

| SYMBOL NO.<br>MODEL | R846 | R847 | R853 | R854 |
|---|---|---|---|---|
| HS-CX7 | × | × | 1kΩ | 1kΩ |


3
4
5
6
13
14
15
S712
PCB-FADE
TO PCB-FADE
VF
P23
P54
D806 DAP202U/ MA142WA
C812 220P
TO PCB-SW VTR
VS
GND(URG)
Li3
P22
P23
P24
P25
P26
P54
P55
P56
P57
EVF VD
EVF 5
EVF_OUT
GND(EVF)
EVF5
MUTE
S-SW
A-FF25
R829 8.2K
R805 2.2K
R824 1K
R805 47K
R804 47K
R803 47K
R802 47K
TL800
D805 DAP202U /MA142WA
R846
R847
D803 DAN202U/MA142WK
IC800
M37460M8-087FP
IC802
S-80725AL-AN-T1
R817 1M
CF800 KBR-4.19MWS
X800 32.768KHz
R841 K-3.3M
R842 K-3.3M
R843 K-3.3M
C804 CH-15
C803 CH-15
C800 Z-.033
R812 1K
TL851
TL850
R860 4.7K
WIND
PWR OFF
P22 (OUT)
P23 (OUT)
P24 (OUT)
P25 (OUT)
P26 (OUT)
P27 (OUT)
VSS
X OUT
X IN
RESET
φ
CNVSS
X COUT
X CIN
S-CONT
TEST H
P-CONT
A-FF25
REC-SW
S-SW
D-SCK
D-SDI
S-CONT
T-RST
BATT DET
TEST IN
S-DET
HIFI/NOR
MUTE
STRB
A-BIAS
P-MUTE
CTL
V-DET
P57 (IN)
P56 (IN)
P55 (IN)
P54 (IN)
M/C RESET
SELF-PWR
D-EE
CP-FG
SU-REEL
M/C CLK
DATA OM
DATA MO
CLK-ADJ
CMR CLK
DATA OC
DATA CO
R809 220K
R808 220K
C810 1000
C801 Z-.01
340 2K
D807 DAN202U/MA142WK
JS
TL700
TL701
TL702
TL703
TL704
TL711
TL705
TL706
TL707
TL708
TL709
TL712
TL713
TL714
D710
D711
D712
D713
D714
D715
D716
D717
D718
TL710
JE
TO EVF-UNIT
EVF UNIT
JB
S711 FF
S713 PB
S715 REW
S717 STOP
S721 STILL
D700
D701
D702
D703
PCB-SW VTR
JT
ZA
S710 (ZOOM T)
S714 (ZOOM W)
PCB-ZOOM
JA
S725 (START/STOP)
PCB-TRIGGER
(I/O)PCB-REAR
PLAY/REC
1.0V(H)
PLAY/REC
0.6V(H)
PLAY/REC
1.0V(H)
R2005 75
R2006 75
J2001
J2002
L2000 18µH
C2016 6.3V 22µ
R2003 F-470
R2002 75
C2006 4V 220µ
D2003 RD7.5 UMB2
D2006 RD7.5 UMB2
R2011 100
R2012 1K
Q2000
R2007 680
R2008 680
R2013 F-15K
TL201 TL202 TL203 TL204
DE2000 G355LNK-2468LTQ
C2012 Z-1µ 16V
C2001 Z-.01
C2002 Z-.01
IC2002 MM1031 XMR
R2033 F-3.9K
D2004 RD7.5 UMB2
R2001 F-3.9K
R2032 F-3.9K
R2014 F-1K
Q2007
TL208 TL209 TL210
TL207
TL211
TL206
TL212
TL205
TL213
DE2001 MXF5050 DR300T
IN GND OUT
R2024 100
R2025 5.6K
R2026 F-1.1K
R2031 F-10K
R2027 F-1K
Q2008
Q2006 DTC144EU/UN5213
DAP202U
MA142WA

NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

- ● PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ● NPN TRANSISTORS ARE 2SC4098-P/2SC3936-B

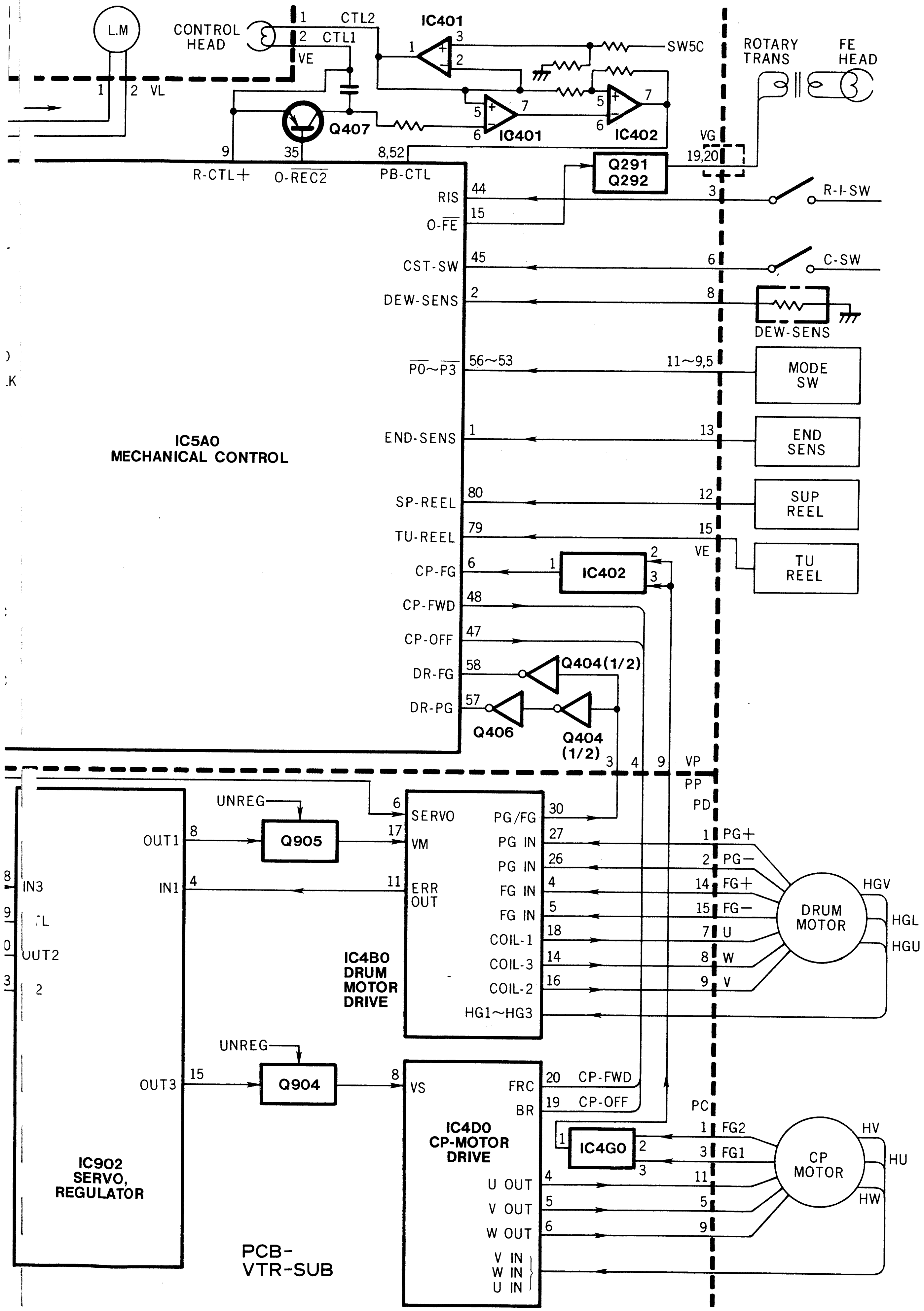

PCB-POWER SW
POWER-SW
VTR
CMR
STILL
STOP
PB
REW
FF
PCB-SW-VTR
SP
RP
JS
VS
GND (URG)
RR
VR
EJECT
TO IC2001
J2000
HIMOCON
DC POWER SUPPLY
F2000
UNREG
GND (URG)
IC803
PCB-REAR
PCB-VTR-SW
FROM BACK UP BATTERY
JB
Li3
IC5D0 LOADING MOTOR DRIVE
IN1
IN2
OUT2
OUT1
L.M
VL
CONTROL HEAD
CTL2
CTL1
VE
IC401
SW5C
IC402
Q407
ROTARY TRANS
FE HEAD
VG
IC800 TIMER (OPERATION)
P22,P24,P54～P56
PWR-SW
REC-SW
EJECT-SW
I (CHARA)
HIMOCON
V-DET
SELF-PWR
VCC
RESET
P-CONT
SU-REEL
CP-FG
CTL
PB-CTL
M/C SI
M/C SO
M/C CLK
Q800
BACK UP
IC802
IC801
V-DET
BACK UP (TO IC500)
Q802
Q801
Q5A2～Q5A4 IC5A2
8.5V
SW5S
SW5C
C5V
IC5A0 MECHANICAL CONTROL
O-UL
O-L
O-REEL
R-CTL+
O-REC2
PB-CTL
Q291
Q292
RIS
O-FE
CST-SW
DEW-SENS
P0～P3
END-SENS
SP-REEL
TU-REEL
CP-FG
CP-FWD
CP-OFF
DR-FG
DR-PG
G-UP
CP-APC
CP-AFC
DR-APC
DR-AFC
Q401
FILTER
CP-ERR
FL400 FILTER
DR-ERR
Q404(1/2)
Q406
R-I-SW
C-SW
DEW-SENS
MODE SW
END SENS
SUP REEL
TU REEL
VP
PP
PD
VQ
PQ
IC4G0
IC902 SERVO, REGULATOR
IN3
CTL
OUT2
IN2
OUT1
IN1
OUT3
Q905
Q904
T901
18V
8.5V
VR902
GND (URG)
-8V
IC4B0 DRUM MOTOR DRIVE
SERVO
VM
ERR OUT
PG/FG
PG IN
FG IN
COIL-1
COIL-3
COIL-2
HG1～HG3
PG+
PG−
FG+
FG−
U
W
V
DRUM MOTOR
HGV
HGL
HGU
IC4D0 CP-MOTOR DRIVE
VS
FRC
BR
U OUT
V OUT
W OUT
V IN
W IN
U IN
CP-FWD
CP-OFF
PC
FG2
FG1
CP MOTOR
HV
HU
HW
PCB-VTR-SUB

IC800 KEY-MATRIX

| OUT / IN | P22 (38) | P23 (37) | P24 (36) | P25 (35) | P26 (34) |
|---|---|---|---|---|---|
| P54 (12) | PB | FADE | FF | ZOOM T | BACK LIGHT |
| P55 (11) | STOP | EVENT | REW | ZOOM W | FULL AUTO |
| P56 (10) | STILL | | MENU | | FOCUS A / M |
| P57 ( 9) | START/ STOP | | | | |

# VTR SECTION BLOCK DIAGRAM (TIMER, MECHANICAL CONTROL)

(CX604)

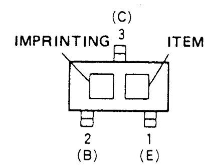
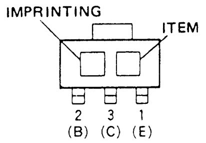
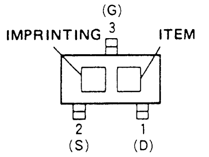

L.M
CONTROL HEAD
CTL2
CTL1
VE
IC401
SW5C
ROTARY TRANS
FE HEAD
Q407
IC401
IC402
VG
19,20
R-CTL+
O-$\overline{\text{REC2}}$
PB-CTL
Q291
Q292
RIS
O-$\overline{\text{FE}}$
R-I-SW
CST-SW
C-SW
DEW-SENS
DEW-SENS
$\overline{\text{P0}}$~$\overline{\text{P3}}$
56~53
11~9,5
MODE SW
IC5A0
MECHANICAL CONTROL
END-SENS
END SENS
SP-REEL
SUP REEL
TU-REEL
TU REEL
CP-FG
IC402
CP-FWD
CP-OFF
DR-FG
Q404(1/2)
DR-PG
Q406
Q404 (1/2)
VP
PP
PD
UNREG
Q905
SERVO
VM
ERR OUT
PG/FG
PG IN
PG IN
FG IN
FG IN
COIL-1
COIL-3
COIL-2
HG1~HG3
PG+
PG−
FG+
FG−
U
W
V
DRUM MOTOR
HGV
HGL
HGU
OUT1
IN1
IN3
OUT2
IC4B0
DRUM MOTOR DRIVE
UNREG
Q904
OUT3
VS
FRC
BR
CP-FWD
CP-OFF
PC
IC4D0
CP-MOTOR DRIVE
IC4G0
FG2
FG1
CP MOTOR
HV
HU
HW
U OUT
V OUT
W OUT
V IN
W IN
U IN
IC902
SERVO, REGULATOR
PCB-VTR-SUB

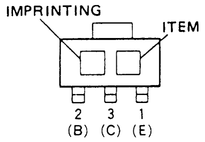
## M/C μ COMPUTER FUNCTION (IC 5AO)

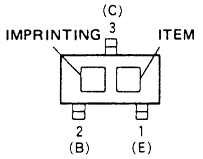
| PIN NO. | NAME | I/O | FUNCTION |
|---|---|---|---|
| 1 | END-SENS | I | "H" input when tape end is detected. |
| 2 | DEW-SENS | I | "H" input when dew falls on the deck. |
| 3 | A-ENV | I | Playback Audio level signal |
| 4 | V-ENV | I | Playback Video level signal |
| 5 | A-FF25/<br>A-FF30 | O | Audio Head switch signal |
| 6 | CP-FG | I | Capstan FG signal |
| 7 | V-FF25/<br>V-FF30 | O | Video Head switch signal |
| 8 | CTL | I | Control signal from CTL Head |
| 9 | RECCTL+ | O | Control signal to CTL Head |
| 14 | A-FF25/<br>A-FF30 | O | Audio Head switch signal |
| 15 | O-$\overline{\text{FE}}$ | O | "L" output when FE Head is ON. |
| 16 | A-FF25 IN<br>A-FF30 IN | I | Audio Head switch signal input |
| 17 | PB-PROT | I | PB-5V input |
| 18 | REC-PROT | I | REC-5V input |
| 19 | M/C CLK | I | Serial data and clock between M/C and OPE μ computer. |
| 20 | DATA SO | O | |
| 21 | DATA SI | I | |
| 22 | G-UP | O | Capstan motor control signal |
| 23 | V-FF12.5/<br>V-FF15 | O | Video Head switch signal |
| 24 | A-FF12.5/<br>A-FF15 | O | Audio Head switch signal |
| 25 | V-OVL | O | Control signal to Head Amp |
| 26 | $\overline{\text{VSYNC}}$ | I | V-Sync input |
| 27 | CNVSS | — | GND |
| 28 | $\overline{\text{RESET}}$ | I | "L" input when μ computer is reset. |
| 29 | X-IN | — | oscillator |
| 30 | X-OUT | | |
| 32 | VSS | — | GND |
| 33 | O-$\overline{\text{PB}}$ | O | "L" output in Playback mode |
| 34 | O-$\overline{\text{REC}}$ | O | "L" output in Recording mode |
| 35 | O-$\overline{\text{REC2}}$ | O | REC control signal ("L" during Recording) |
| 36 | D-ON | O | "H" output when drum motor is ON. |
| 37 | A-OVL | O | Control signal to Head Amp |
| 38 | O-SP | O | "H" output in SP mode |
| 39 | O-$\overline{\text{PB2}}$ | O | "H" output in Playback mode |
| 40 | O-$\overline{\text{EE1}}$ | O | "L" output in EE mode<br>(Recording or Stop mode) |
| 41 | O-$\overline{\text{EE2}}$ | O | |
| 42 | HF-$\overline{\text{REC2}}$ | O | "L" output during HiFi recording |
| 43 | O-REEL | O | Reel pulse output |
| 44 | RIS | I | Recording Inhibit signal ( "L" input when recording is possible.) |
| 45 | CST-SW | I | Casset Housing is open at "H" |
| 46 | O-$\overline{\text{EDIT}}$ | O | "L" output in Editting mode |
| 47 | CP-OFF | O | "L" output when Capstan motor is ON. |
| 48 | CP-FWD | O | "H" output to drive Capstan motor forward direction |
| 49 | DR-PG IN | I | Drum PG signal input |
| 51 | DR-FG | I | Drum FG signal input |
| 52 | PB-CTL | I | Control signal from CTL Head |
| 53 | $\overline{\text{P3}}$ | I | Deck mode switch input |
| 54 | $\overline{\text{P2}}$ | | |
| 55 | $\overline{\text{P1}}$ | | |
| 56 | $\overline{\text{P0}}$ | | |
| 57 | DR-PG | I | Drum PG signal input |
| 58 | DR-FG | I | Drum FG signal input |
| 59 | DR-AFC | O | Drum servo speed error output |
| 60 | DR-APC | O | Drum servo phase error output |
| 61 | CP-AFC | O | Capstan servo speed error output |
| 62 | CP-APC | O | Capstan servo phase error output |
| 63 | O-$\overline{\text{N}}$ | O | "H" output in special playback mode |
| 64 | O-LP | O | "H" output in LP mode |
| 65 | O-EE | O | "H" output in EE mode |
| 66 | ES-LED | O | pulse output to light ES-LED |
| 67 | O-MUTE | O | "H" output in special playback mode |
| 68 | O-REC | O | "H" output in Recording mode |
| 69 | O-L | O | Loading motor drive output |
| 70 | O-UL | | |
| 71 | PG-MM | I | PG-MM control signal |
| 72 | AVSS | — | GND |
| 73 | VCC | I | Power source input |
| 74 | AVCC | | |
| 75 | VREF | | |
| 76 | $\overline{\text{SS-VSYNC}}$ | O | Quasi-sync signal for special playback |
| 77 | 2/3PG OUT | O | Quasi-Drum PG signal output |
| 78 | TR-ADJ | O | TR-MM signal output |
| 79 | TU-REEL | I | Reel pulse input |
| 80 | SP-REEL | I | |

# CHIP PARTS SHAPES

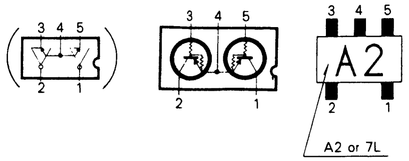
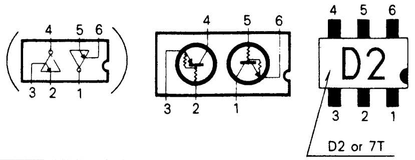
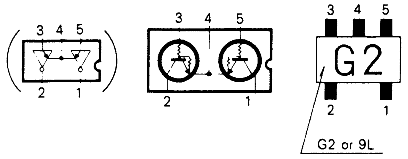
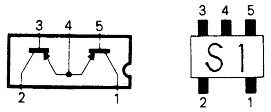
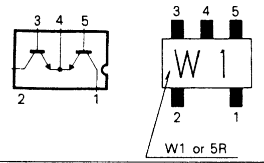
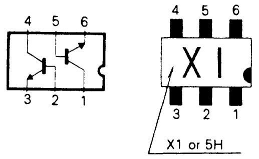
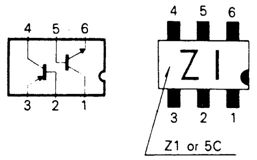
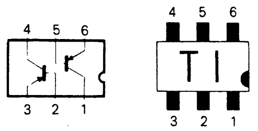
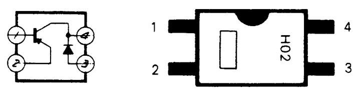
(4-1)

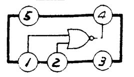
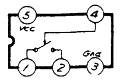
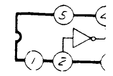
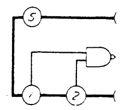
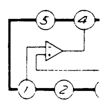
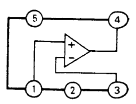
| DESCRIPTION | IMPRINTING | PARTS No. | SHAPES |
|---|---|---|---|
| | | CHIP TRANSISTOR | |
| 2SA1235-F,G | MF, MG | 260P802090 |  (C)<br>IMPRINTING<br>3<br>ITEM<br>2<br>1<br>(B)<br>(E) |
| 2SA1576-R/2SB1218A-R<br>2SB1218A-Q | FR, BR<br>BQ | 260P859020<br>260P859070 | |
| 2SA1576-R | FR | 260P859050 | |
| 2SA1577-Q/2SB1219A-R | HQ, DR | 260P861020 | |
| 2SA1577-Q<br>2SA1577-R | HQ<br>HR | 260P861050<br>260P861060 | |
| 2SA1610-Y34 | Y34 | 260P870010 | |
| 2SC4081-Q/2SD1819A-Q | BQ, ZQ | 260P855010 | |
| 2SC4081-R/2SD1819A-R<br>2SC4081-S/2SD1819A-S | BR, ZS<br>BS, ZS | 260P855020<br>260P855030 | |
| 2SC4098-P/2SC3936-B | AP, KB | 260P854020 | |
| 2SC4098-Q/2SC3936-C | AQ, KC | 260P854030 | |
| 2SC4176-B34 | B34 | 260P869020 | |
| 2SC4176-B35 | B35 | 260P869010 | |
| 2SD1819A-Q | ZQ | 260P855070 | |
| 2SD1949-Q/2SD1820A-R | YQ, XR | 260P867020 | |
| 2SD1949-R | YR | 260P867060 | |
| DTA144EU/UN5113 | 16, 6C | 260P856010 | |
| DTC114EK | 24 | 260P808010 | |
| DTC144EU/UN5213 | 26, 8C | 260P857010 | |
| DTC144EU | 26 | 260P857020 | |
| DTA114EU/UN5111 | 14, 6A | 260P858010 | |
| 2SB798-DK | DK | 260P482010 |  IMPRINTING<br>ITEM<br>2 3 1<br>(B) (C) (E) |
| 2SB1114-ZL | ZL | 260P847010 | |
| 2SC3736-OK | OK | 260P866010 | |
| 2SD999-CK | CK | 260P865010 | |
| 2SK209GR | XG | 260P864010 |  (G)<br>IMPRINTING<br>3<br>ITEM<br>2<br>1<br>(S)<br>(D) |

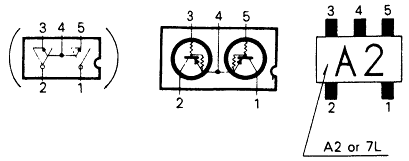
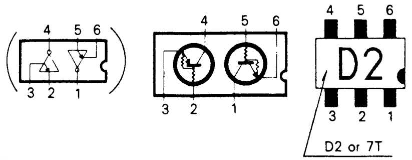
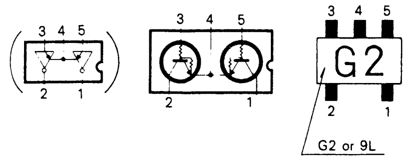
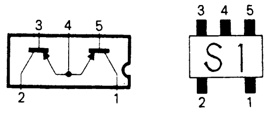
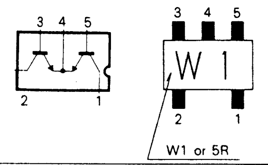
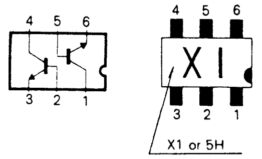
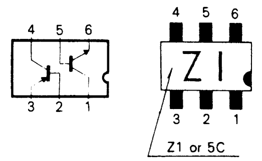
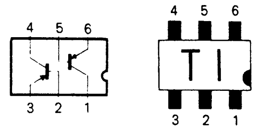
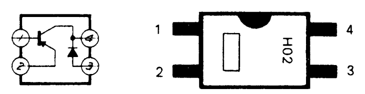
| | | | |
|---|---|---|---|
| 2SC2873-Y | MY | 260P868010 |  IMPRINTING<br>ITEM<br>2 3 1<br>(B) (C) (E) |
| 2SA1213-Y | NY | 260P701010 | |
| | | | |

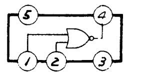
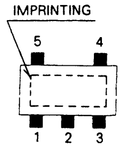
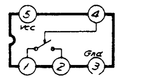
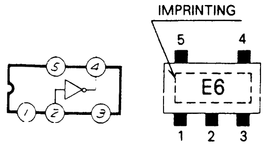
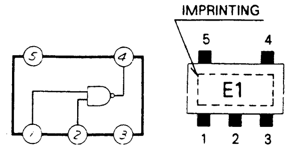
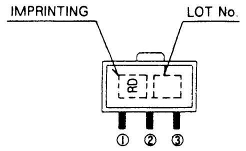
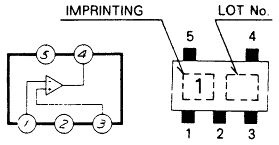
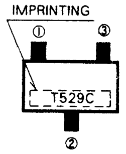
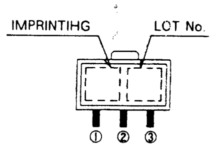
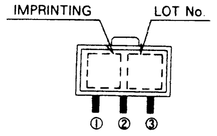
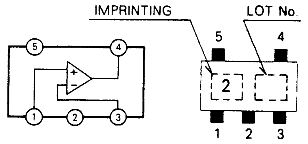
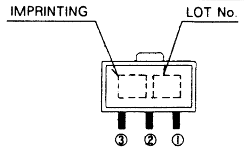
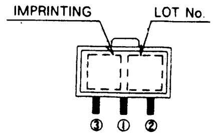
| | | | |
|---|---|---|---|
| DTA124EU | 15 | 260P871020 |  (C)<br>IMPRINTING<br>3<br>ITEM<br>2<br>1<br>(B)<br>(E) |
| DTC124EU | 25 | 260P872020 | |
| 2SC4618-P/2SC4655-B<br>DTA144EE/UN9113<br>DTC144EE/UN9213 | AP, KB<br>16, 6C<br>26, 8C | 260P877020<br>260P879010<br>260P880010 | |

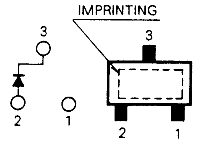
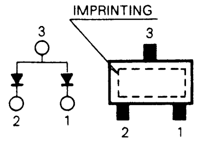
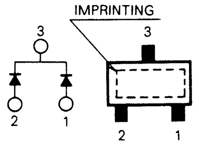
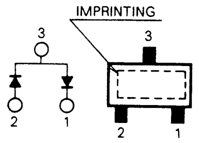
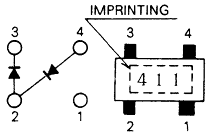
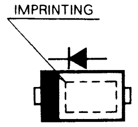
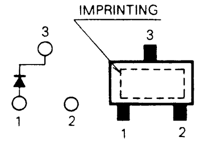
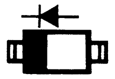
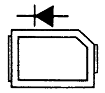
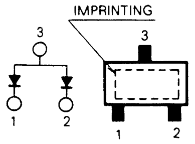
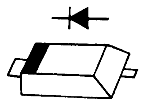
(4-2)

| DESCRIPTION | IMPRINTING | PARTS No. | SHAPES |
|---|---|---|---|
| | | CHIP TRANSISTOR | |
| FMA2/XN1113 | A2<br>or<br>7L | 260P853010 |  3 4 5<br>2 1<br>3 4 5<br>2 1<br>3 4 5<br>A2<br>2 1<br>A2 or 7L |
| IMD2/XN4312 | D2<br>or<br>7T | 260P851010 |  4 5 6<br>3 2 1<br>4 5 6<br>3 2 1<br>4 5 6<br>D2<br>3 2 1<br>D2 or 7T |
| FMG2/XN1213 | G2<br>or<br>9L | 260P852010 |  3 4 5<br>2 1<br>3 4 5<br>2 1<br>3 4 5<br>G2<br>2 1<br>G2 or 9L |
| FMS1 | S1 | 260P843010 |  3 4 5<br>2 1<br>3 4 5<br>S1<br>2 1 |
| FMW1/XN1501 | W1<br>or<br>5R | 260P844020 |  3 4 5<br>2 1<br>3 4 5<br>W1<br>2 1<br>W1 or 5R |
| IMX1/XN4501 | X1<br>or<br>5H | 260P845020 |  4 5 6<br>3 2 1<br>4 5 6<br>X1<br>3 2 1<br>X1 or 5H |
| IMZ1/XN4601 | Z1<br>or<br>5C | 260P849020 |  4 5 6<br>3 2 1<br>4 5 6<br>Z1<br>3 2 1<br>Z1 or 5C |
| IMT1 | T1 | 260P863010 |  4 5 6<br>3 2 1<br>4 5 6<br>T1<br>3 2 1 |
| SAH02-VIL | H02 | 260P873010 |  |

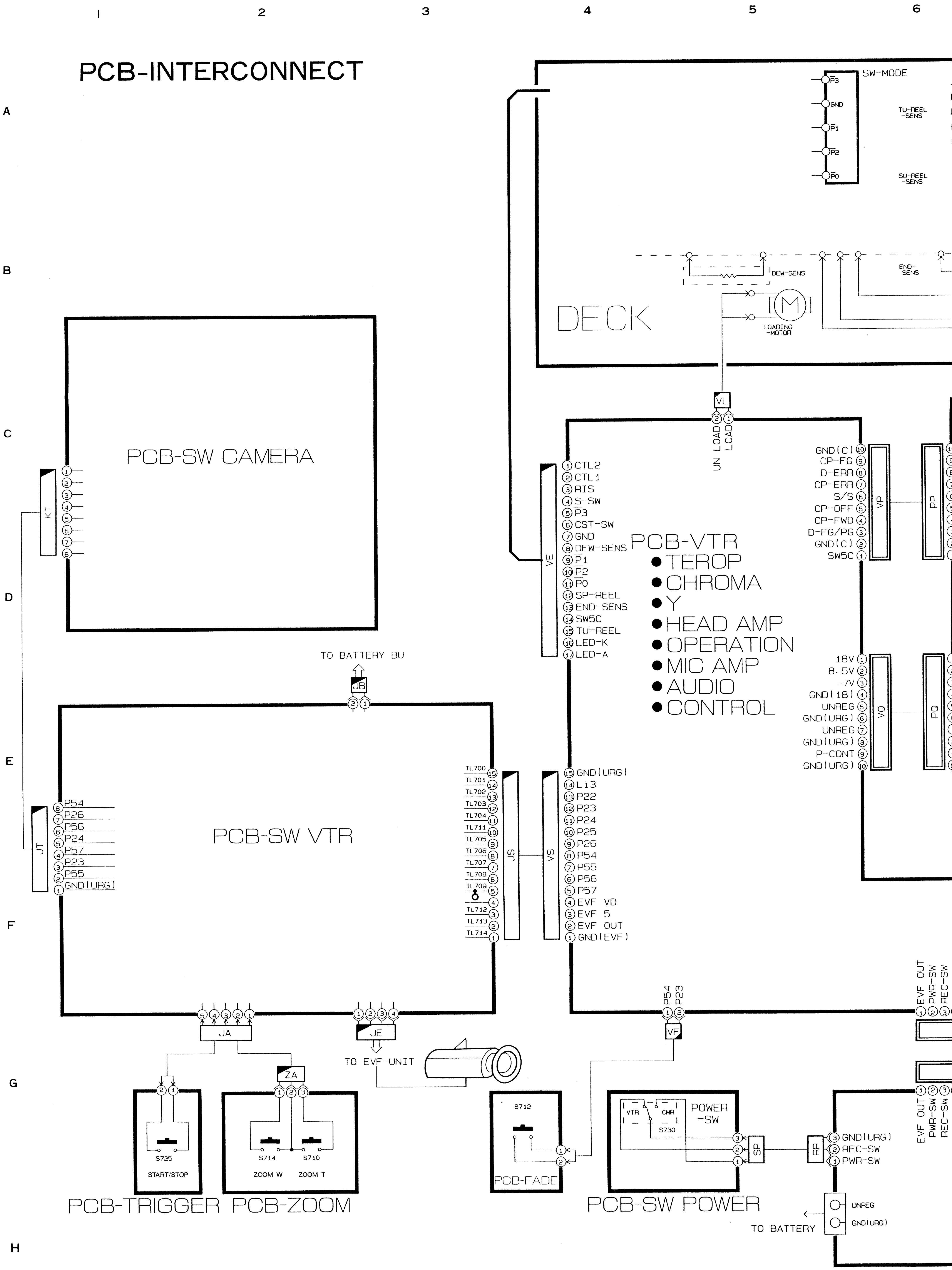
| DESCRIPTION | IMPRINTING | PARTS No. | |
|---|---|---|---|
| | | CHIP IC | |
| SC14S01F | C3 | 263P223010 |  |
| SC14S66F | C9 | 263P217010 |  5<br>4<br>Vcc<br>GND<br>1<br>2<br>3 |
| SC7SU04F | E6 | 263P220010 |  |
| SC7S00F | E1 | 263P230010 |  |
| S-81250HG-RD-T1 | RD | 272P360010 | IM<br>① Vss<br>② VIN<br>③ VOUT |
| NJM2406F | 1 | 272P364010 | IMPR<br> |
| PST529C | T529C | 272P357010 | ① IN<br>② GND<br>③ OUT |
| S-80725AL-AN-T1<br>S-8054ALB-LM-T1<br>S-8054HNM | AN<br>LM<br>CQ | 263P375010<br>272P362010<br>263P440010 | ① OUT<br>② VDD<br>③ Vss |
| S-81215AG-RK-T1<br>/RH5RA16AA | RK<br>or<br>6A | 272P359010 | ① GND<br>② VIN<br>③ VOUT |
| NJM2107F | 2 | 272P592010 | IMPR<br> |
| M5236ML<br>M5237ML | 36<br>37 | 272P294010<br>272P674010 | IN<br>① VIN<br>② GND<br>③ VREF |
| S-81350HG-KD-T1 | KD | 263P373010 | ① GND<br>② VIN<br>③ VOUT |

| PARTS No. | SHAPES |
|---|---|
| RANSISTOR | |
| 2 P853010 |  |
| 260P851010 |  |
| 2 852010 |  |
| 260P843010 |  |
| 2 844020 |  |
| 260P845020 |  |
| 2 849020 |  |
| 260P863010 |  |
| 2 873010 |  |

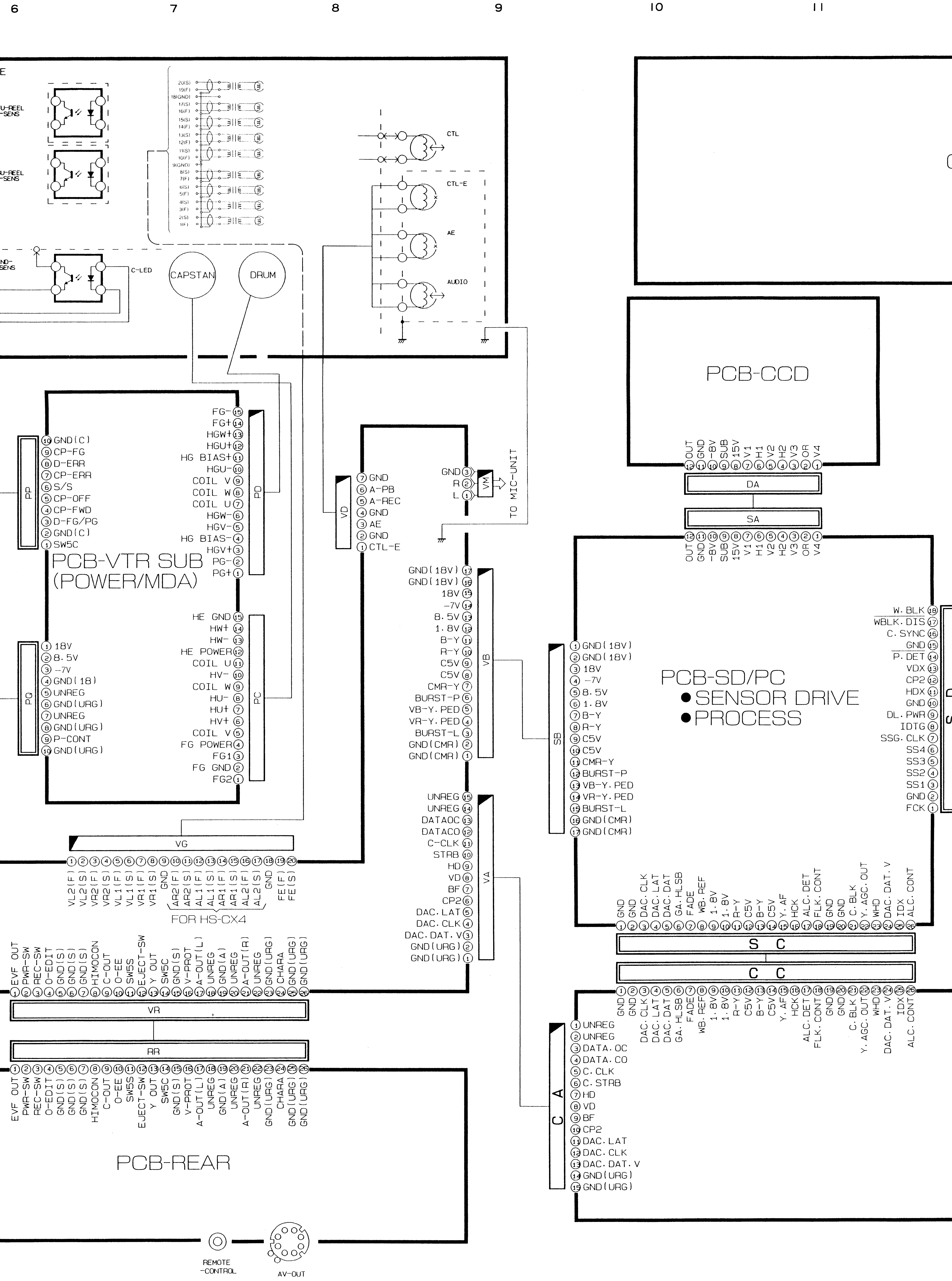
| DESCRIPTION | IMPRINTING | PARTS No. | SHAPES |
|---|---|---|---|
| CHIP IC | | | |
| SC14S01F | C3 | 263P223010 |    IMPRINTING |
| SC14S66F | C9 | 263P217010 |  |
| SC7SU04F | E6 | 263P220010 |   IMPRINTING<br>E6 |
| SC7S00F | E1 | 263P230010 |   IMPRINTING<br>E1 |
| S-81250HG-RD-T1 | RD | 272P360010 | ① Vss<br>② VIN<br>③ VOUT<br>  IMPRINTING<br>LOT No.<br>RD |
| NJM2406F | 1 | 272P364010 |   IMPRINTING<br>LOT No.<br>1 |
| PST529C | T529C | 272P357010 | ① IN<br>② GND<br>③ OUT<br>  IMPRINTING<br>T529C |
| S-80725AL-AN-T1<br>S-8054ALB-LM-T1<br>S-8054HNM | AN<br>LM<br>CQ | 263P375010<br>272P362010<br>263P440010 | ① OUT<br>② VDD<br>③ Vss<br>  IMPRINTIHG<br>LOT No. |
| S-81215AG-RK-T1<br>/RH5RA16AA | RK<br>or<br>6A | 272P359010 | ① GND<br>② VIN<br>③ VOUT<br>  IMPRINTING<br>LOT No. |
| NJM2107F | 2 | 272P592010 |   IMPRINTING<br>LOT No.<br>2 |
| M5236ML<br>M5237ML | 36<br>37 | 272P294010<br>272P674010 | ① VIN<br>② GND<br>③ VREF<br>  IMPRINTING<br>LOT No. |
| S-81350HG-KD-T1 | KD | 263P373010 | ① GND<br>② VIN<br>③ VOUT<br>  IMPRINTING<br>LOT No. |

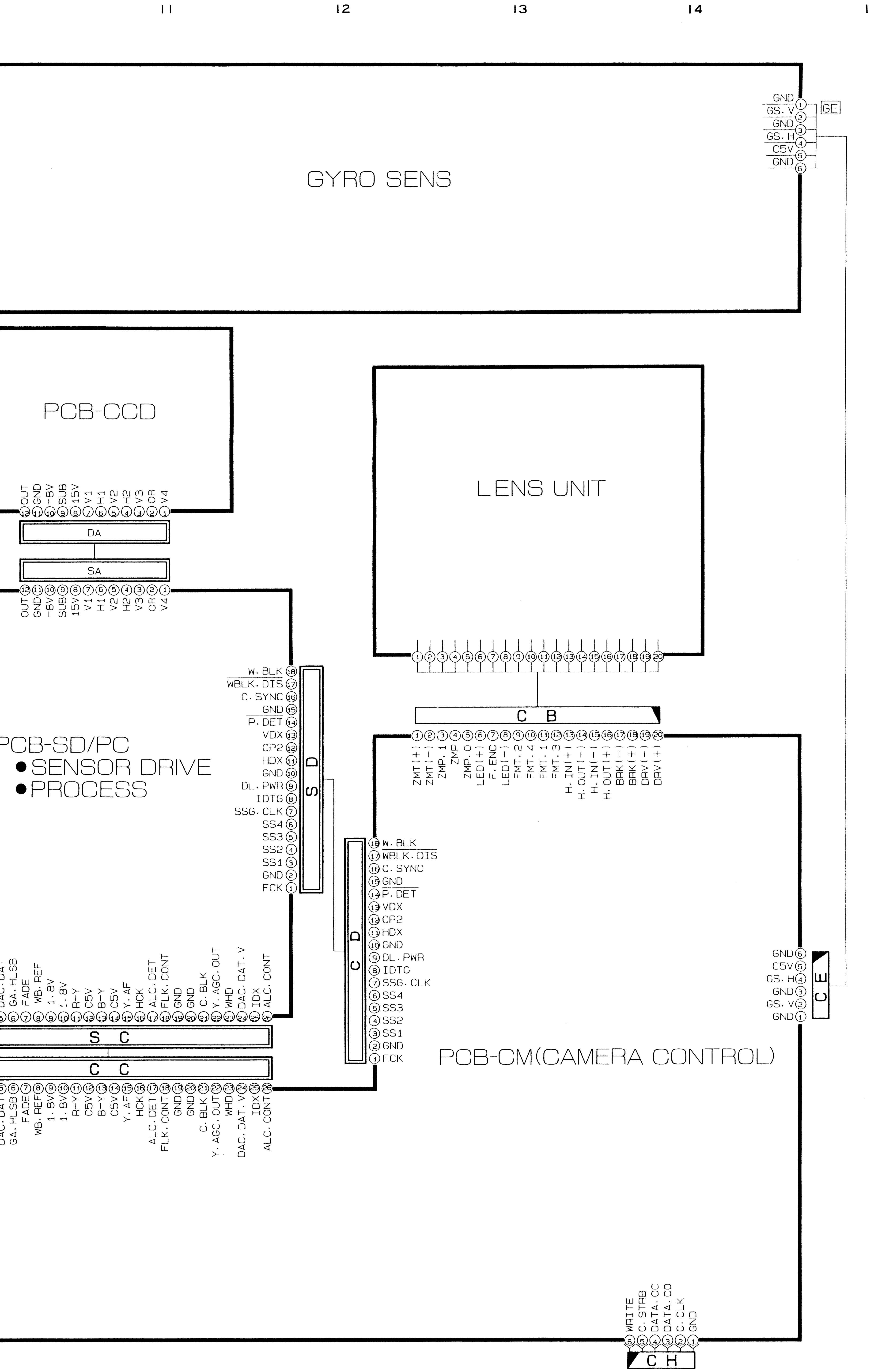
| DESCRIPTION | IMPRINTING | PARTS No. | SHAPES |
|---|---|---|---|
| CHIP DIODE | | | |
| RD2.4MB<br>RD5.1MB1<br>RD6.8MB1<br>RD7.5MB2<br>RD10MB<br>RD11MB2 | 24<br>511<br>681<br>752<br>100<br>1102 | 264P815010<br>264P815060<br>264P816040<br>264P816050<br>264P816080<br>264P816090 |   IMPRINTING |
| DAP202U/MA142WA<br>MA142WA<br>MA132WA | P or MO<br>MO<br>MO | 264P814010<br>264P814030<br>264P841030 |   IMPRINTING |
| DAN202U/MA142WK | N or MU | 264P828010 |   IMPRINTING |
| DA204U<br>DA221/MA133 | K<br>K, MP | 264P830020<br>264P843010 |   IMPRINTING |
| ND411G-2 | 411 | 264P833010 |   IMPRINTING<br>411 |
| U1GWJ44<br>SPB-54V<br>SFPB-64V | GW<br>B54<br>B64 | 264P603010<br>264P831010<br>264P832010 |   IMPRINTING |
| MA141K<br>MA720 | MH<br>M2W | 264P837010<br>264P850010 |   IMPRINTING |
| ISV205<br>ISV223<br>MA341<br>RD7.5UMB2 | | 264P838010<br>264P845010<br>264P834010<br>264P844050 |  |
| LN1351C | | 264P839010 |  |
| MA741WA | M2P | 264P847010 |   IMPRINTING |
| MA110<br>MA728<br>MA732 | 1A<br>2A<br>2C | 264P848010<br>264P849010<br>264P846010 |  |

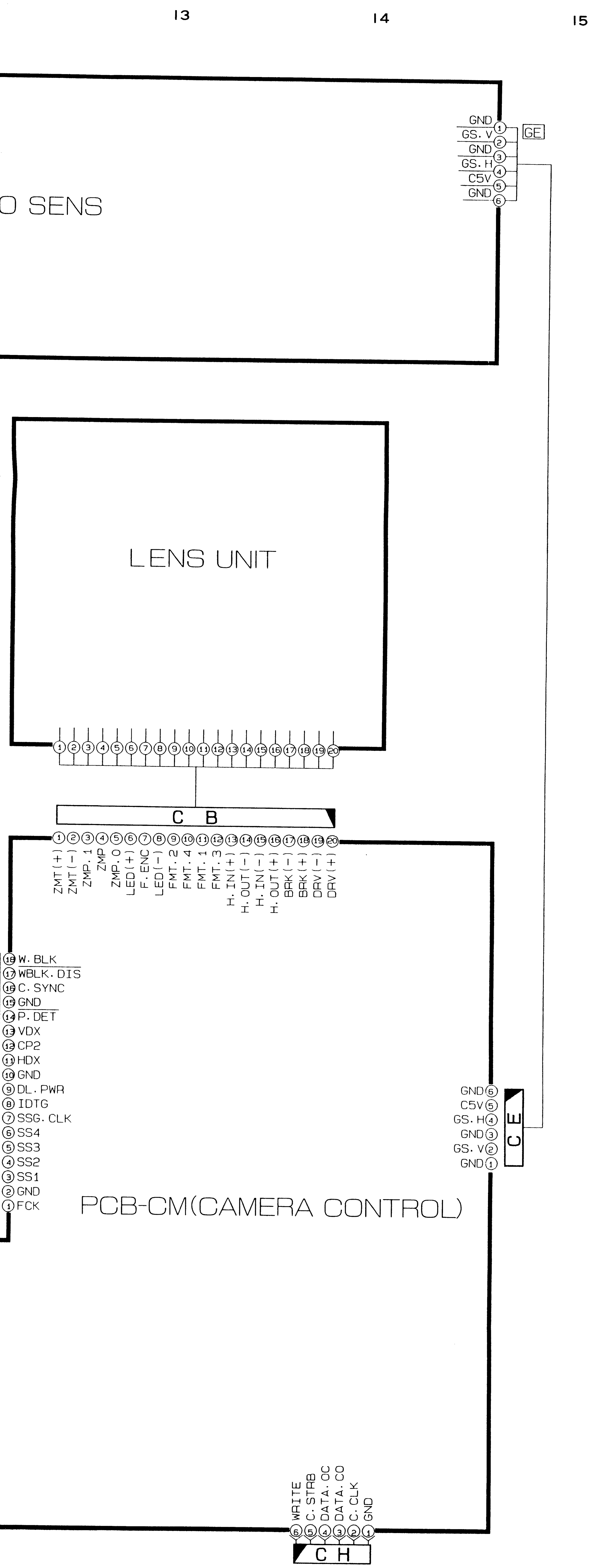
# PCB-INTERCONNECT



1
2
3
4
5
6
A
B
C
D
E
F
G
H
DECK
SW-MODE
P3
GND
P1
P2
P0
TU-REEL -SENS
SU-REEL -SENS
DEW-SENS
END-SENS
LOADING -MOTOR
VL
UN LOAD
LOAD
PCB-SW CAMERA
KT
PCB-VTR
● TEROP
● CHROMA
● Y
● HEAD AMP
● OPERATION
● MIC AMP
● AUDIO
● CONTROL
VE
① CTL2
② CTL1
③ RIS
④ S-SW
⑤ P3
⑥ CST-SW
⑦ GND
⑧ DEW-SENS
⑨ P1
⑩ P2
⑪ P0
⑫ SP-REEL
⑬ END-SENS
⑭ SW5C
⑮ TU-REEL
⑯ LED-K
⑰ LED-A
VP
PP
GND(C) ⑩
CP-FG ⑨
D-ERR ⑧
CP-ERR ⑦
S/S ⑥
CP-OFF ⑤
CP-FWD ④
D-FG/PG ③
GND(C) ②
SW5C ①
VQ
PQ
18V ①
8.5V ②
-7V ③
GND(18) ④
UNREG ⑤
GND(URG) ⑥
UNREG ⑦
GND(URG) ⑧
P-CONT ⑨
GND(URG) ⑩
TO BATTERY BU
JB
PCB-SW VTR
JT
⑧ P54
⑦ P26
⑥ P56
⑤ P24
④ P57
③ P23
② P55
① GND(URG)
JS
TL700 ⑮
TL701 ⑭
TL702 ⑬
TL703 ⑫
TL704 ⑪
TL711 ⑩
TL705 ⑨
TL706 ⑧
TL707 ⑦
TL708 ⑥
TL709 ⑤
④
TL712 ③
TL713 ②
TL714 ①
VS
⑮ GND(URG)
⑭ L13
⑬ P22
⑫ P23
⑪ P24
⑩ P25
⑨ P26
⑧ P54
⑦ P55
⑥ P56
⑤ P57
④ EVF VD
③ EVF 5
② EVF OUT
① GND(EVF)
P54
P23
VF
EVF OUT
PWR-SW
REC-SW
JA
JE
TO EVF-UNIT
ZA
S725
START/STOP
S714
S710
ZOOM W
ZOOM T
PCB-TRIGGER
PCB-ZOOM
S712
PCB-FADE
VTR
CMR
S730
POWER -SW
SP
PCB-SW POWER
RP
③ GND(URG)
② REC-SW
① PWR-SW
UNREG
GND(URG)
TO BATTERY


6
7
8
9
10
11
E
U-REEL
-SENS
U-REEL
-SENS
ND-
SENS
C-LED
20(S)
19(F)
18(GND)
17(S)
16(F)
15(S)
14(F)
13(S)
12(F)
11(S)
10(F)
9(GND)
8(S)
7(F)
6(S)
5(F)
4(S)
3(F)
2(S)
1(F)
CAPSTAN
DRUM
CTL
CTL-E
AE
AUDIO
PCB-CCD
OUT ⑫ GND ⑪ -8V ⑩ SUB ⑨ 15V ⑧ V1 ⑦ H1 ⑥ V2 ⑤ H2 ④ V3 ③ OR ② V4 ①
DA
SA
⑫ OUT ⑪ GND ⑩ -8V ⑨ SUB ⑧ 15V ⑦ V1 ⑥ H1 ⑤ V2 ④ H2 ③ V3 ② OR ① V4
PP
⑩ GND(C)
⑨ CP-FG
⑧ D-ERR
⑦ CP-ERR
⑥ S/S
⑤ CP-OFF
④ CP-FWD
③ D-FG/PG
② GND(C)
① SW5C
PD
FG- ⑮
FG+ ⑭
HGW+ ⑬
HGU+ ⑫
HG BIAS+ ⑪
HGU- ⑩
COIL V ⑨
COIL W ⑧
COIL U ⑦
HGW- ⑥
HGV- ⑤
HG BIAS- ④
HGV+ ③
PG- ②
PG+ ①
PCB-VTR SUB
(POWER/MDA)
PQ
① 18V
② 8.5V
③ -7V
④ GND(18)
⑤ UNREG
⑥ GND(URG)
⑦ UNREG
⑧ GND(URG)
⑨ P-CONT
⑩ GND(URG)
PC
HE GND ⑮
HW+ ⑭
HW- ⑬
HE POWER ⑫
COIL U ⑪
HV- ⑩
COIL W ⑨
HU- ⑧
HU+ ⑦
HV+ ⑥
COIL V ⑤
FG POWER ④
FG1 ③
FG GND ②
FG2 ①
VD
⑦ GND
⑥ A-PB
⑤ A-REC
④ GND
③ AE
② GND
① CTL-E
GND ③
R ②
L ①
VM
TO MIC-UNIT
VB
GND(18V) ⑰
GND(18V) ⑯
18V ⑮
-7V ⑭
8.5V ⑬
1.8V ⑫
B-Y ⑪
R-Y ⑩
C5V ⑨
C5V ⑧
CMR-Y ⑦
BURST-P ⑥
VB-Y.PED ⑤
VR-Y.PED ④
BURST-L ③
GND(CMR) ②
GND(CMR) ①
SB
① GND(18V)
② GND(18V)
③ 18V
④ -7V
⑤ 8.5V
⑥ 1.8V
⑦ B-Y
⑧ R-Y
⑨ C5V
⑩ C5V
⑪ CMR-Y
⑫ BURST-P
⑬ VB-Y.PED
⑭ VR-Y.PED
⑮ BURST-L
⑯ GND(CMR)
⑰ GND(CMR)
PCB-SD/PC
● SENSOR DRIVE
● PROCESS
W.BLK ⑱
WBLK.DIS ⑰
C.SYNC ⑯
GND ⑮
P.DET ⑭
VDX ⑬
CP2 ⑫
HDX ⑪
GND ⑩
DL.PWR ⑨
IDTG ⑧
SSG.CLK ⑦
SS4 ⑥
SS3 ⑤
SS2 ④
SS1 ③
GND ②
FCK ①
VA
UNREG ⑮
UNREG ⑭
DATAOC ⑬
DATACO ⑫
C-CLK ⑪
STRB ⑩
HD ⑨
VD ⑧
BF ⑦
CP2 ⑥
DAC.LAT ⑤
DAC.CLK ④
DAC.DAT.V ③
GND(URG) ②
GND(URG) ①
VG
① VL2(F) ② VL2(S) ③ VR2(F) ④ VR2(S) ⑤ VL1(F) ⑥ VL1(S) ⑦ VR1(F) ⑧ VR1(S) ⑨ GND ⑩ AR2(F) ⑪ AR2(S) ⑫ AL1(F) ⑬ AL1(S) ⑭ AR1(F) ⑮ AR1(S) ⑯ AL2(F) ⑰ AL2(S) ⑱ GND ⑲ FE(F) ⑳ FE(S)
FOR HS-CX4
① GND ② GND ③ DAC.CLK ④ DAC.LAT ⑤ DAC.DAT ⑥ GA.HLSB ⑦ FADE ⑧ WB.REF ⑨ 1.8V ⑩ 1.8V ⑪ R-Y ⑫ C5V ⑬ B-Y ⑭ C5V ⑮ Y.AF ⑯ HCK ⑰ ALC.DET ⑱ FLK.CONT ⑲ GND ⑳ GND ㉑ C.BLK ㉒ Y.AGC.OUT ㉓ WHD ㉔ DAC.DAT.V ㉕ IDX ㉖ ALC.CONT
S C
C C
① GND ② GND ③ DAC.CLK ④ DAC.LAT ⑤ DAC.DAT ⑥ GA.HLSB ⑦ FADE ⑧ WB.REF ⑨ 1.8V ⑩ 1.8V ⑪ R-Y ⑫ C5V ⑬ B-Y ⑭ C5V ⑮ Y.AF ⑯ HCK ⑰ ALC.DET ⑱ FLK.CONT ⑲ GND ⑳ GND ㉑ C.BLK ㉒ Y.AGC.OUT ㉓ WHD ㉔ DAC.DAT.V ㉕ IDX ㉖ ALC.CONT
① EVF OUT ② PWR-SW ③ REC-SW ④ O-EDIT ⑤ GND(S) ⑥ GND(S) ⑦ GND(S) ⑧ HIMOCON ⑨ C-OUT ⑩ O-EE ⑪ SW5S ⑫ EJECT-SW ⑬ Y OUT ⑭ SW5C ⑮ GND(S) ⑯ V-PROT ⑰ A-OUT(L) ⑱ UNREG ⑲ GND(A) ⑳ UNREG ㉑ A-OUT(R) ㉒ UNREG ㉓ GND(URG) ㉔ CHARA ㉕ GND(URG) ㉖ GND(URG)
VR
RR
① EVF OUT ② PWR-SW ③ REC-SW ④ O-EDIT ⑤ GND(S) ⑥ GND(S) ⑦ GND(S) ⑧ HIMOCON ⑨ C-OUT ⑩ O-EE ⑪ SW5S ⑫ EJECT-SW ⑬ Y OUT ⑭ SW5C ⑮ GND(S) ⑯ V-PROT ⑰ A-OUT(L) ⑱ UNREG ⑲ GND(A) ⑳ UNREG ㉑ A-OUT(R) ㉒ UNREG ㉓ GND(URG) ㉔ CHARA ㉕ GND(URG) ㉖ GND(URG)
PCB-REAR
CA
① UNREG
② UNREG
③ DATA.OC
④ DATA.CO
⑤ C.CLK
⑥ C.STRB
⑦ HD
⑧ VD
⑨ BF
⑩ CP2
⑪ DAC.LAT
⑫ DAC.CLK
⑬ DAC.DAT.V
⑭ GND(URG)
⑮ GND(URG)
REMOTE
-CONTROL
AV-OUT


11
12
13
14
1
GYRO SENS
GND ① GS. V ② GND ③ GS. H ④ C5V ⑤ GND ⑥
GE
PCB-CCD
OUT GND -8V SUB 15V V1 H1 V2 H2 V3 OR V4
⑫ ⑪ ⑩ ⑨ ⑧ ⑦ ⑥ ⑤ ④ ③ ② ①
DA
SA
LENS UNIT
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳
C B
ZMT(+) ZMT(-) ZMP.1 ZMP ZMP.0 LED(+) F.ENC LED(-) FMT.2 FMT.4 FMT.1 FMT.3 H.IN(+) H.OUT(-) H.IN(-) H.OUT(+) BRK(-) BRK(+) DRV(-) DRV(+)
PCB-SD/PC
●SENSOR DRIVE
●PROCESS
W. BLK ⑱ WBLK. DIS ⑰ C. SYNC ⑯ GND ⑮ P. DET ⑭ VDX ⑬ CP2 ⑫ HDX ⑪ GND ⑩ DL. PWR ⑨ IDTG ⑧ SSG. CLK ⑦ SS4 ⑥ SS3 ⑤ SS2 ④ SS1 ③ GND ② FCK ①
S D
C D
DAC. DAT GA. HLSB FADE WB. REF 1.8V 1.8V R-Y C5V B-Y C5V Y. AF HCK ALC. DET FLK. CONT GND GND C. BLK Y. AGC. OUT WHD DAC. DAT. V IDX ALC. CONT
⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖
S C
C C
GND ⑥ C5V ⑤ GS. H ④ GND ③ GS. V ② GND ①
C E
PCB-CM(CAMERA CONTROL)
WRITE C. STRB DATA. OC DATA. CO C. CLK GND
⑥ ⑤ ④ ③ ② ①
C H


13
14
15
O SENS
GND ①
GS. V ②
GND ③
GS. H ④
C5V ⑤
GND ⑥
GE
LENS UNIT
①②③④⑤⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳
C B
ZMT(+)
ZMT(−)
ZMP.1
ZMP
ZMP.0
LED(+)
F.ENC
LED(−)
FMT.2
FMT.4
FMT.1
FMT.3
H.IN(+)
H.OUT(−)
H.IN(−)
H.OUT(+)
BRK(−)
BRK(+)
DRV(−)
DRV(+)
⑱ W. BLK
⑰ WBLK. DIS
⑯ C. SYNC
⑮ GND
⑭ P. DET
⑬ VDX
⑫ CP2
⑪ HDX
⑩ GND
⑨ DL. PWR
⑧ IDTG
⑦ SSG. CLK
⑥ SS4
⑤ SS3
④ SS2
③ SS1
② GND
① FCK
PCB-CM(CAMERA CONTROL)
GND ⑥
C5V ⑤
GS. H ④
GND ③
GS. V ②
GND ①
C E
WRITE ⑥
C. STRB ⑤
DATA. OC ④
DATA. CO ③
C. CLK ②
GND ①
C H

## SCHEMATIC DIAGRAM

**NOTE 1:**

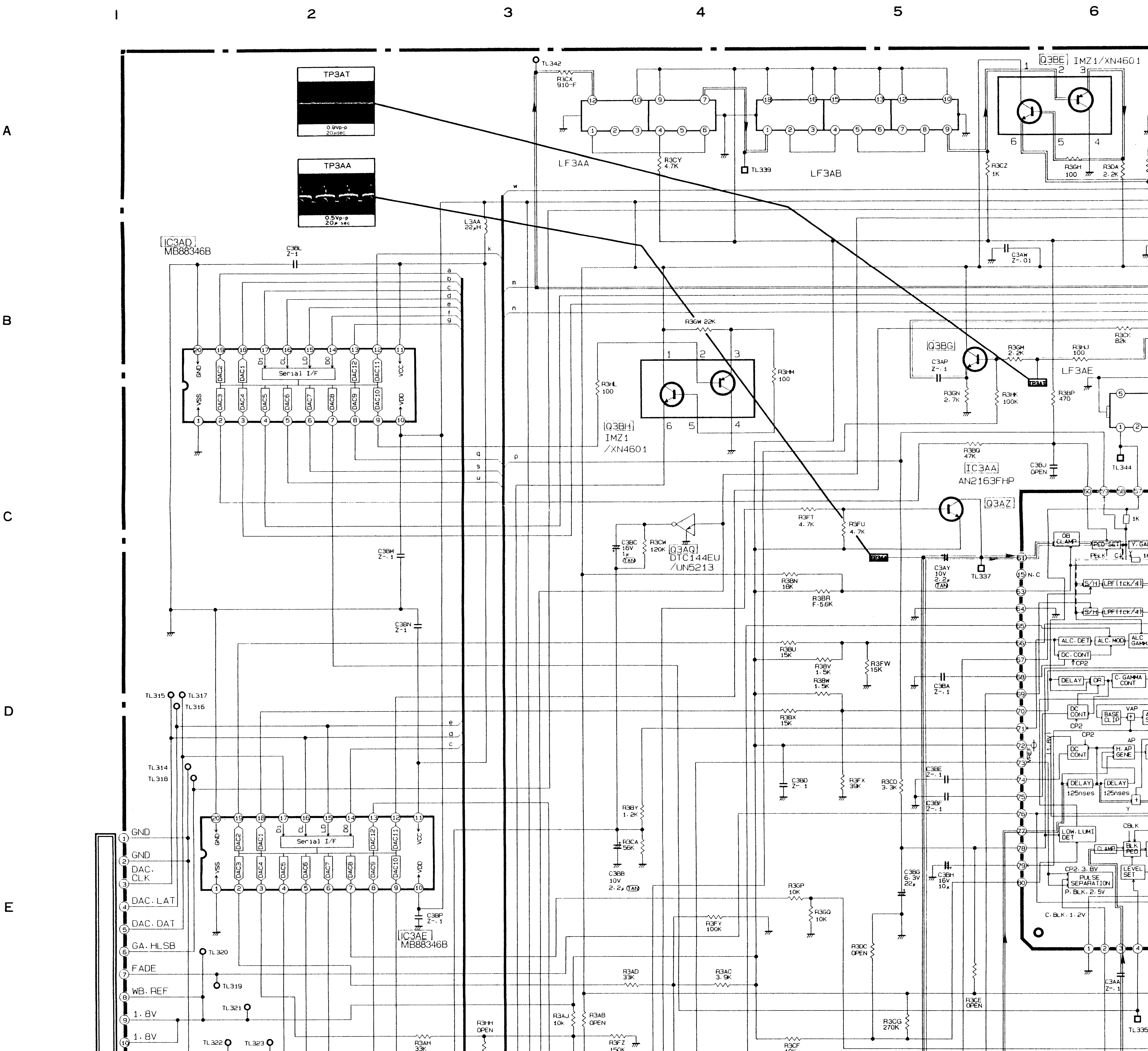
- DC voltages were measured from points indicated to the circuit ground with a Digital voltmeter.
- Waveforms of camera section were taken with the four color chart.
- Waveforms of VTR section were taken with standard color bar signal.
- The unit of resistance "ohm" entirely omitted.
  Accordingly, K=1000 ohms.
  M=1000K ohms.
- Resistors, not specifically designated, are R-M-chip resistors.
- The tolerance of resistor value, not specifically designated, is: ±5%.
- The unit of capacitance, not specifically designated, is:
  a) µF, for numbers less than 1
  b) PF, for numbers more than 1
- Capacitors, not specifically designated are Ceramic chip capacitors except electrolytic capacitors.
- The marks of capacitors are as follows:
  (TAN) : Tantalum capacitor
  ⫩ : Electrolytic capacitor
- The tolerance of capacitor value, not specifically designated is: ±10%
  and J = ±5% K = ±10% M = ±20% $P = {}^{+100\%}_{-\ 0\%}$
  C = ±0.25PF D = ±0.5PF F = ± 1PF $Z = {}^{+80\%}_{-20\%}$ N =±30%
- Ceramic capacitors with the marks RH, UJ, SL, etc. are temperature compensating types.

| SPECIFIC SYMBOL | |
|---|---|
| Zener Diode<br>LE Diode<br>Photo Diode | Crystal unit<br>Ceramic filter |

This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

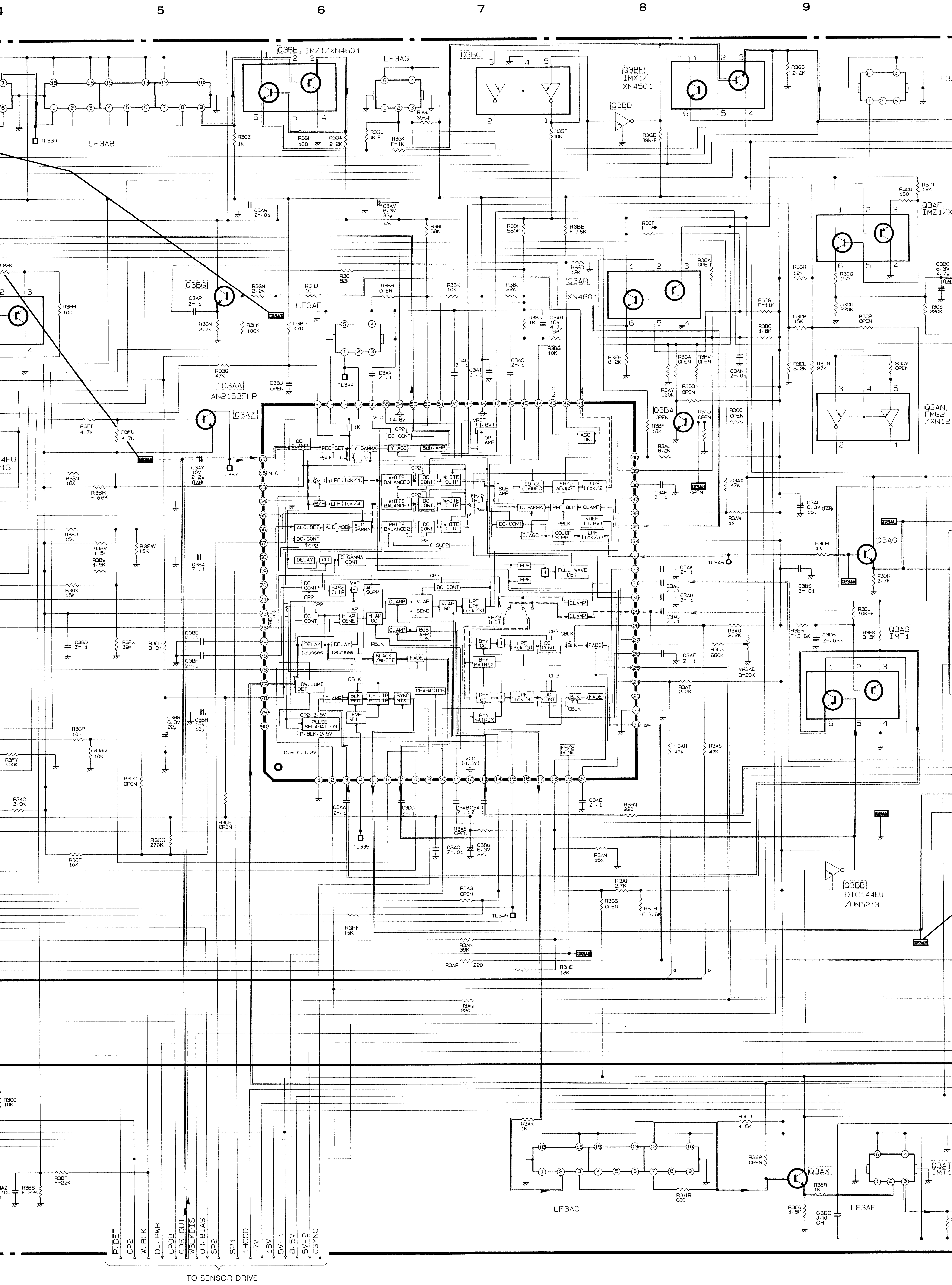
⚠
SERVICING PRECAUTION

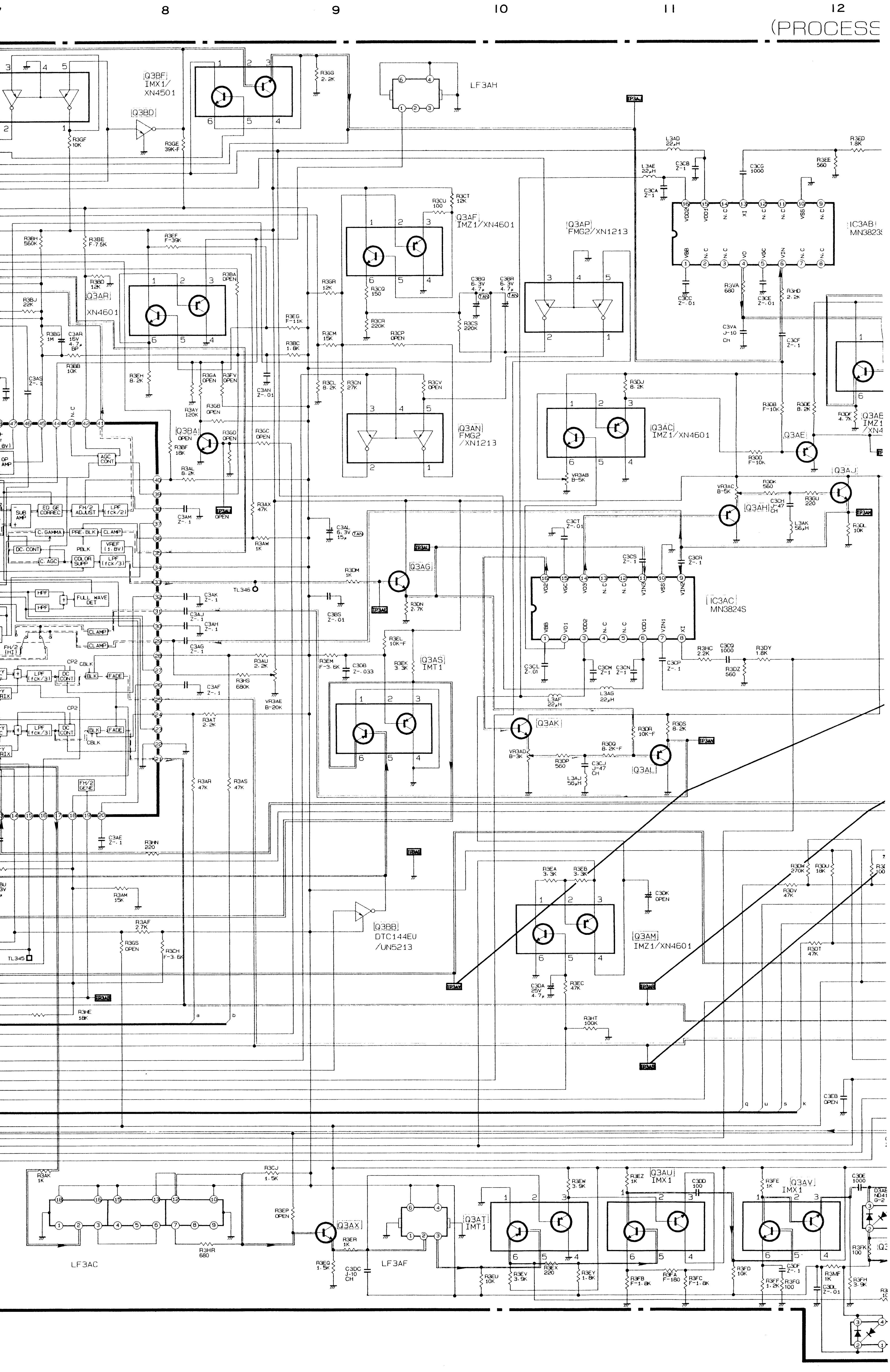
SYMBOLS INDICATE COMPONENTS HAVING SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY AND PERFORMANCE. THEREFOR REPLACEMENT OF ANY SAFETY PARTS SHOULD BE IDENTICAL IN VALUE AND CHARACTERISTICS.
DON'T DEGRADE THE SAFETY OF THE VCR THROUGH IMPROPER SERVICING.


1
2
3
4
5
6
A
B
C
D
E
F
G
H
TP3AT
0.8Vp-p 20nsec
TP3AA
0.5Vp-p 20μsec
IC3AD MB88346B
IC3AE MB88346B
Serial I/F
GND
DAC2
DAC1
DI
CL
LD
DO
DAC12
DAC11
VCC
VSS
DAC3
DAC4
DAC5
DAC6
DAC7
DAC8
DAC9
DAC10
VDD
C3BL Z-.1
C3BM Z-.1
C3BN Z-.1
C3BP Z-.1
TL342
R3CX 910-F
LF3AA
LF3AB
LF3AE
R3CY 4.7K
TL339
Q3BE IMZ1/XN4601
R3CZ 1K
R3GH 100
R3DA 2.2K
C3AW Z-.01
L3AA 22μH
R3GW 22K
R3HL 100
R3HM 100
Q3BH IMZ1 /XN4601
Q3BG
C3AP Z-.1
R3GN 2.7K
R3HK 100K
R3GM 2.2K
R3HJ 100
R3CK 82K
R3BP 470
R3BQ 47K
C3BJ OPEN
IC3AA AN2163FHP
TL344
Q3AZ
R3FT 4.7K
R3FU 4.7K
C3BC 16V 1μ TAN
R3CW 120K
Q3AQ DTC144EU /UN5213
C3AY 10V 2.2μ TAN
TL337
R3BN 18K
R3BR F-5.6K
R3BU 15K
R3BV 1.5K
R3FW 15K
R3BW 1.5K
C3BA Z-.1
R3BX 15K
C3BD Z-.1
R3FX 39K
R3CD 3.3K
C3BE Z-.1
C3BF Z-.1
R3BY 1.2K
C3CA 56K
C3BB 10V 2.2μ TAN
C3BG 6.3V 22μ
C3BH 16V 10μ
R3GP 10K
R3GQ 10K
R3FY 100K
R3DC OPEN
R3AD 33K
R3AC 3.9K
R3CE OPEN
R3AJ 10k
R3AB OPEN
R3CG 270K
R3HH OPEN
R3AH 33K
R3FZ 150K
R3CF 10K
R3HG OPEN
C3AA Z-.1
TL335
R3HF 15K
OB CLAMP
PED-SET
S/H
LPF(fck/4)
ALC.DET
ALC.MOD
ALC GAMMA
DC.CONT
CP2
DELAY
OR
C.GAMMA CONT
DC CONT
BASE CLIP
VAP
AP
H.AP GENE
DELAY 125nses
LOW.LUMI DET
CBLK
CLAMP
BLK PED
CP2.3.8V
PULSE SEPARATION
P.BLK.2.5V
LEVEL SET
C.BLK.1.2V
N.C
TL315
TL317
TL316
TL314
TL318
GND
GND
DAC.CLK
DAC.LAT
DAC.DAT
GA.HLSB
FADE
WB.REF
1.8V
1.8V
R-Y
C5V
B-Y
C5V
Y.AF
HCK
ALC.DET
FLK.CONT
GND
GND
C.BLK
Y.AGC.OUT
WHD
DAC.DAT.V
IDX
ALC.CONT
SC
TO PCB-CM CC
TL320
TL319
TL321
TL322
TL323
TL324
TL325
TL327
TL326
TL328
TL329
R3GY 2.2K
R3GX 10K
R3GZ 4.7K
R3HA 1.2K
Q3BJ
R3HB 27K
R3AA 0
R3CB 6.8K
R3CC 10K
TL332
TL330
TL334
TL333
TL331
C3AZ J-100 CH
R3BS F-22K
R3BT F-22K
TL347
TL348
P.DET
CP2
W.BLK
DL.PWR
CPOB
CDS.OUT
WBLKDIS
OR.BIAS
SP2
SP1
1HCCD
-7V
18V
5V-1
8.5V
5V-2
CSYNC
TO SENSOR DRIVE

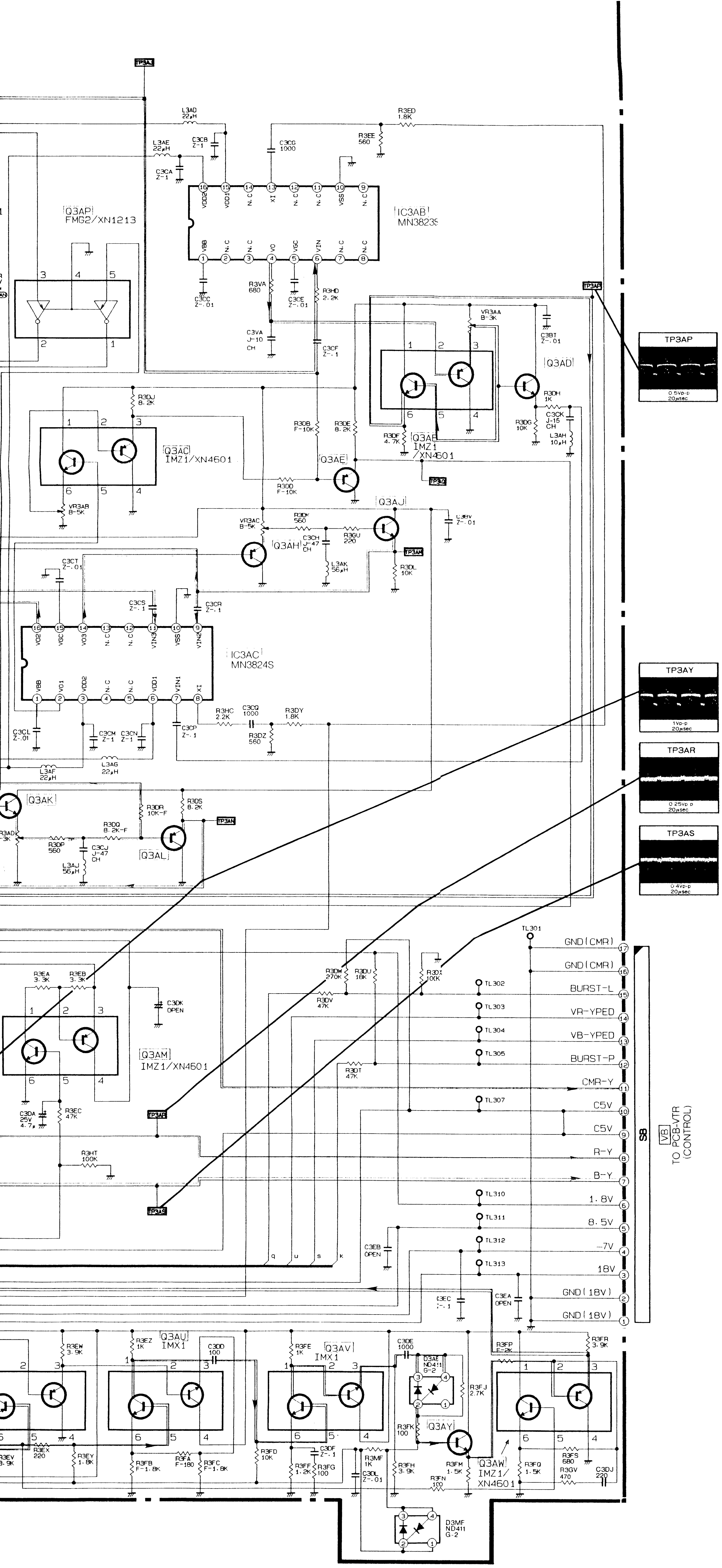
NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

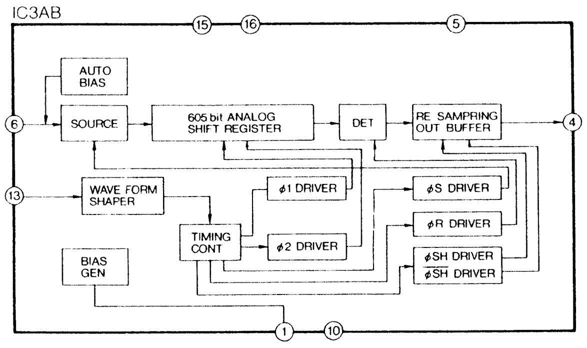
- ● PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ● NPN TRANSISTORS ARE 2SC4098-Q/ 2SC3936-C

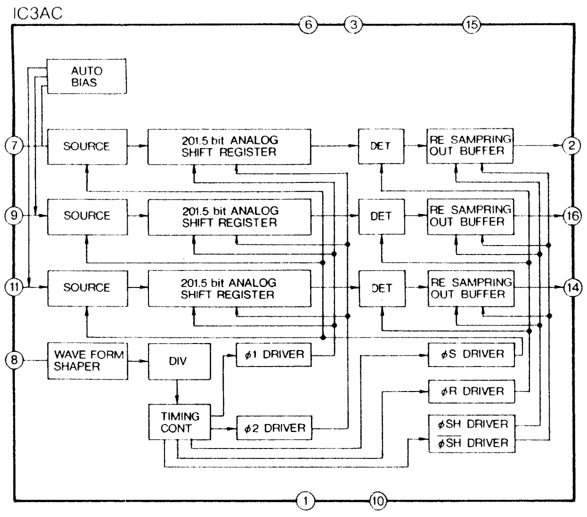

4
5
6
7
8
9
Q3BE IMZ1/XN4601
LF3AG
Q3BC
Q3BF IMX1/XN4501
Q3BD
LF3AB
TL339
R3CZ 1K
R3GH 100
R3DA 2.2K
R3GJ 1K-F
R3GK F-1K
R3GL 39K-F
R3GF 10K
R3GE 39K-F
R3GG 2.2K
C3AW Z-.01
C3AV 6.3V 33μ OS
R3BL 68K
R3BH 560K
R3BE F-7.5K
R3EF F-39K
R3CT 12K
R3CU 100
Q3AF IMZ1/X
R3CK 82K
R3BM OPEN
R3HJ 100
LF3AE
R3BK 10K
R3BJ 22K
R3BD 12K
Q3AR XN4601
R3BA OPEN
R3GR 12K
R3CQ 150
R3CR 220K
R3CS 220K
C3BQ 6.3V 4.7μ
Q3BG
C3AP Z-.1
R3GM 2.2K
R3GN 2.7K
R3HK 100K
TP3AT
R3BP 470
R3HM 100
R3BG 1M
C3AR 16V 4.7μ BP
R3BB 10K
R3EG F-11K
R3BC 1.8K
R3CM 15K
R3CP OPEN
R3EH 8.2K
R3GA OPEN
R3FV OPEN
C3AN Z-.01
R3CL 8.2K
R3CN 27K
R3CV OPEN
R3BQ 47K
IC3AA AN2163FHP
C3BJ OPEN
TL344
C3AX Z-.1
C3AU Z-.1
C3AT Z-.1
C3AS Z-.1
Q3AZ
R3AY 120K
R3GB OPEN
Q3BA OPEN
R3GD OPEN
R3GC OPEN
R3BF 18K
R3AL 8.2K
Q3AN FMG2 /XN12
R3FT 4.7K
R3FU 4.7K
TP3AC
C3AY 10V 2.2μ TAN
TL337
N.C
VCC
(4.8V)
VREF (1.8V)
OP AMP
AGC CONT
OB CLAMP
PED SET
Y.GAMMA
Y.AGC
6db.AMP
DC.CONT
PBLK
1K
S/H
LPF(fck/4)
WHITE BALANCE0
DC CONT
WHITE CLIP
WHITE BALANCE1
WHITE BALANCE2
SUB AMP
ED GE CORREC
FH/2 ADJUST
LPF (fck/2)
FH/2 (HI)
C.GAMMA
PRE.BLK
CLAMP
DC.CONT
C.AGC
COLOR SUPP
VREF (1.8V)
LPF (fck/3)
ALC.DET
ALC.MOD
ALC GAMMA
C.SUPP
CP2
DELAY
OR
C.GAMMA CONT
HPF
FULL WAVE DET
BASE CLIP
VAP
AP SUPP
V.AP GENE
V.AP GC
LPF LPF (fck/3)
H.AP GENE
H.AP GC
AP
8dB AMP
125nses
BLACK /WHITE
FADE
B-Y GC
B-Y MATRIX
R-Y GC
R-Y MATRIX
BLK
LOW.LUMI DET
BLK PED
L-CLIP H-CLIP
SYNC MIX
CHARACTOR
LEVEL SET
PULSE SEPARATION
CP2.3.8V
P.BLK.2.5V
C.BLK.1.2V
CBLK
FH/2 GENE
C3AM Z-.1
TP3AU OPEN
R3AX 47K
C3AL 6.3V 15μ TAN
R3AW 1K
TP3AH
TL346
R3DM 1K
Q3AG
C3AK Z-.1
C3AJ Z-.1
C3AH Z-.1
C3BS Z-.01
TP3AE
R3DN 2.7K
C3AG Z-.1
R3EL 10K-F
R3EM F-3.6K
C3DB Z-.033
R3EX 3.3K
Q3AS IMT1
R3AU 2.2K
R3HS 680K
VR3AE B-20K
C3AF Z-.1
R3AT 2.2K
R3AR 47K
R3AS 47K
R3BN 18K
R3BR F-5.6K
R3BU 15K
R3BV 1.5K
R3FW 15K
R3BW 1.5K
C3BA Z-.1
R3BX 15K
C3BD Z-.1
R3FX 39K
R3CD 3.3K
C3BE Z-.1
C3BF Z-.1
C3BG 6.3V 22μ
C3BH 16V 10μ
R3GP 10K
R3GQ 10K
R3FY 100K
R3DC OPEN
R3AC 3.9K
R3CE OPEN
R3CG 270K
R3CF 10K
C3AA Z-.1
C3DG Z-.1
C3AB Z-.1
C3AD Z-.1
C3AE Z-.1
R3HN 220
TL335
R3AE OPEN
C3AC Z-.01
C3BU 6.3V 22μ
R3AM 15K
TP3AG
Q3BB DTC144EU /UN5213
R3AG OPEN
R3AF 2.7K
R3GS OPEN
R3CH F-3.6K
TL345
R3HF 15K
R3AN 39K
TP3AS
TP3AR
R3AP 220
R3HE 18K
a
b
R3AQ 220
R3CC 10K
R3AK 1K
R3CJ 1.5K
LF3AC
R3EP OPEN
Q3AX
R3HR 680
R3ER 1K
R3EQ 1.5K
C3DC J-10 CH
LF3AF
Q3AT IMT1
R3BS F-22K
R3BT F-22K
P.DET
CP2
W.BLK
DL.PWR
CPOB
CDS.OUT
WBLKDIS
OR.BIAS
SP2
SP1
1HCCD
-7V
18V
5V-1
8.5V
5V-2
CSYNC
TO SENSOR DRIVE

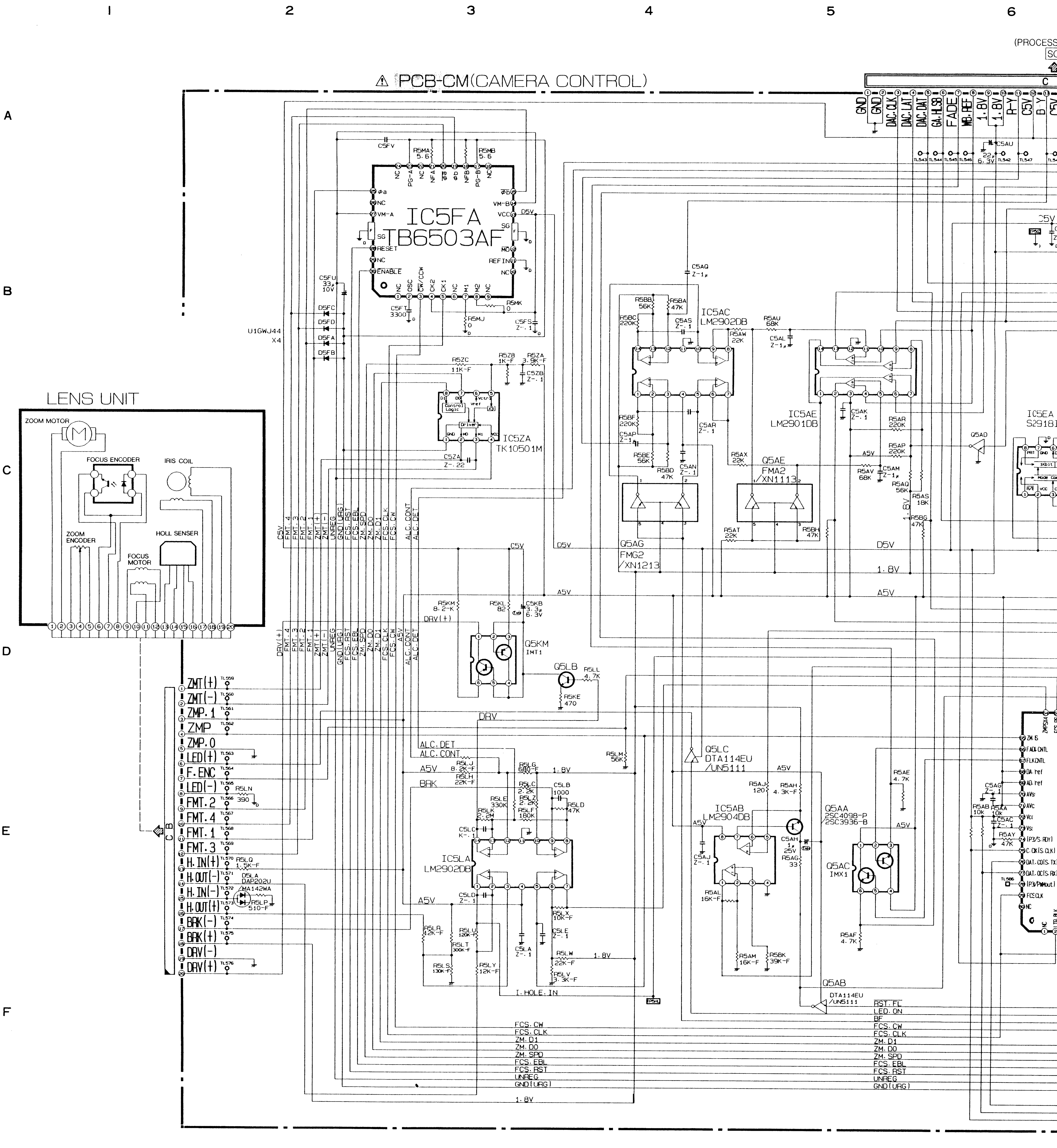
8
9
10
11
12
(PROCESS
Q3BF
IMX1/
XN4501
Q3BD
R3GF 10K
R3GE 39K-F
R3GG 2.2K
LF3AH
TP3AJ
L3AD 22μH
R3ED 1.8K
L3AE 22μH
C3CB Z-1
C3CG 1000
R3EE 560
C3CA Z-1
IC3AB
MN3823S
VDD2
VDD1
N.C
XI
VSS
VBB
VO
VGC
VIN
R3VA 680
C3CC Z-.01
C3CE Z-.01
R3HD 2.2K
C3VA J-10 CH
C3CF Z-.1
R3CT 12K
R3CU 100
Q3AF
IMZ1/XN4601
Q3AP
FMG2/XN1213
R3CQ 150
R3CR 220K
R3CP OPEN
C3BQ 6.3V 4.7μ
C3BR 6.3V 4.7μ
TAN
R3CS 220K
R3BH 560K
R3BE F-7.5K
R3EF F-39K
R3BA OPEN
R3BD 12K
Q3AR
XN4601
R3BJ 22K
R3BG 1M
C3AR 16V 4.7μ BP
R3BB 10K
C3AS Z-.1
R3EH 8.2K
R3GA OPEN
R3FV OPEN
R3AY 120K
R3GB OPEN
C3AN Z-.01
R3GR 12K
R3EG F-11K
R3CM 15K
R3BC 1.8K
R3CL 8.2K
R3CN 27K
R3CV OPEN
Q3AN
FMG2
/XN1213
R3DJ 8.2K
Q3AC
IMZ1/XN4601
VR3AB B-5K
R3DB F-10K
R3DE 8.2K
R3DF 4.7K
Q3AE
IMZ1
/XN4
R3DD F-10K
Q3AJ
VR3AC B-5K
R3DK 560
C3CH J-47 CH
R3GU 220
Q3AH
L3AK 56μH
TP3AK
R3DL 10K
Q3BA
R3GD OPEN
R3GC OPEN
R3BF 18K
R3AL 6.2K
AGC CONT
OP AMP
SUB AMP
EDGE CORREC
FH/2 ADJUST
LPF (fck/2)
C3AM Z-.1
TP3AL
OPEN
R3AX 47K
C.GAMMA
PRE.BLK
CLAMP
PBLK
VREF (1.8V)
DC.CONT
C.AGC
COLOR SUPP
LPF (fck/3)
R3AW 1K
C3AL 6.3V 15μ
C3CT Z-.01
C3CS Z-1
C3CR Z-1
TP3AU
Q3AG
R3DM 1K
TP3AE
R3DN 2.7K
C3BS Z-.01
TL346
C3AK Z-.1
C3AJ Z-.1
C3AH Z-.1
C3AG Z-.1
HPF
FULL WAVE DET
CLAMP
FH/2 (H)
IC3AC
MN3824S
VO2
VGC
VO3
VIN3
VIN2
VO1
VIN1
R3EL 10K-F
R3EM F-3.6K
C3DB Z-.033
R3EK 3.3K
Q3AS
IMT1
R3AU 2.2K
R3HS 680K
VR3AE B-20K
C3AF Z-.1
CP2
CBLK
BLK
FADE
LPF (fck/3)
DC CONT
R3HC 2.2K
C3CQ 1000
R3DY 1.8K
R3DZ 560
C3CP Z-.1
C3CL Z-.01
C3CM Z-1
C3CN Z-1
L3AF 22μH
L3AG 22μH
R3AT 2.2K
Q3AK
R3DR 10K-F
R3DS 8.2K
TP3AN
R3DQ 8.2K-F
VR3AD B-3K
R3DP 560
C3CJ J-47 CH
L3AJ 56μH
Q3AL
R3AR 47K
R3AS 47K
FH/2 GENE
C3AE Z-.1
R3HN 220
TP3AG
R3EA 3.3K
R3EB 3.3K
C3DK OPEN
Q3AM
IMZ1/XN4601
R3DW 270K
R3DU 18K
R3DV 47K
R3DT 47K
R3AM 15K
R3AF 2.7K
R3GS OPEN
R3CH F-3.6K
TL345
Q3BB
DTC144EU
/UN5213
C3DA 25V 4.7μ
R3EC 47K
TP3AY
TP3AR
TP3AB
R3HE 18K
R3HT 100K
TP3AS
C3EB OPEN
R3CJ 1.5K
R3AK 1K
LF3AC
R3HR 680
R3EP OPEN
Q3AX
R3ER 1K
R3EQ 1.5K
C3DC J-10 CH
LF3AF
Q3AT
IMT1
R3EW 3.9K
R3EZ 1K
Q3AU
IMX1
C3DD 100
R3FE 1K
Q3AV
IMX1
C3DE 1000
R3EU 10K
R3EV 3.9K
R3EX 220
R3EY 1.8K
R3FB F-1.8K
R3FA F-180
R3FC F-1.8K
R3FD 10K
R3FF 1.2K
R3FG 100
C3DF Z-.1
R3MF 1K
C3DL Z-.01
R3FK 100
R3FH 3.9K

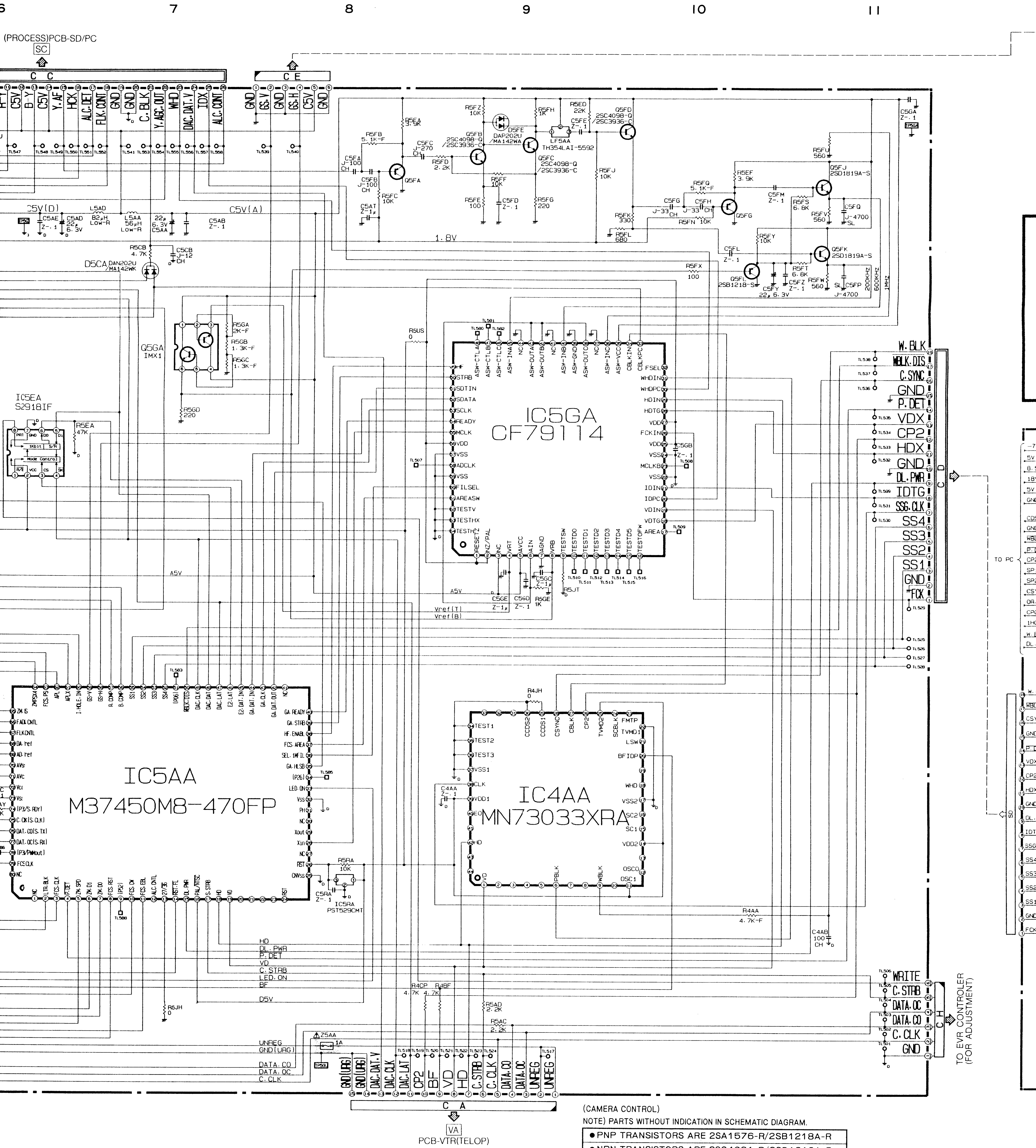
# ⚠ (PROCESS) PCB-SJ/PC


TP3AJ
L3AD 22μH
L3AE 22μH
C3CB Z-1
C3CA Z-1
C3CG 1000
R3ED 1.8K
R3EE 560
IC3AB MN3823S
VDD2 VDD1 N.C XI N.C N.C VSS N.C
VBB N.C N.C VO VGC VIN N.C N.C
Q3AP FMG2/XN1213
C3CC Z-.01
R3VA 680
C3CE Z-.01
R3HD 2.2K
C3VA J-10 CH
C3CF Z-.1
TP3AP
VR3AA B-3K
C3BT Z-.01
Q3AD
R3DH 1K
C3CK J-15 CH
L3AH 10μH
R3DG 10K
R3DJ 8.2K
Q3AC IMZ1/XN4601
VR3AB B-5K
R3DB F-10K
R3DE 8.2K
R3DF 4.7K
Q3AB IMZ1 /XN4601
Q3AE
R3DD F-10K
TP3Q
Q3AJ
VR3AC B-5K
R3DK 560
C3CH J-47 CH
R3GU 220
Q3AH
L3AK 56μH
TP3AM
R3DL 10K
L3BV Z-.01
C3CT Z-.01
C3CS Z-.1
C3CR Z-.1
IC3AC MN3824S
VO2 VGC VO3 N.C N.C VIN3 VSS VIN2
VBB VO1 VDD2 N.C N.C VDD1 VIN1 XI
C3CL Z-.01
C3CM Z-1
C3CN Z-1
C3CP Z-.1
R3HC 2.2K
C3CQ 1000
R3DY 1.8K
R3DZ 560
L3AF 22μH
L3AG 22μH
Q3AK
R3DR 10K-F
R3DS 8.2K
TP3AN
R3DQ 8.2K-F
R3DP 560
C3CJ J-47 CH
L3AJ 56μH
Q3AL
TP3AP 0.5Vp-p 20μsec
TP3AY 1Vp-p 20μsec
TP3AR 0.25Vp-p 20μsec
TP3AS 0.4Vp-p 20μsec
R3EA 3.3K
R3EB 3.3K
C3DK OPEN
Q3AM IMZ1/XN4601
C3DA 25V 4.7μ
R3EC 47K
TP3AR
R3HT 100K
TP3AS
R3DW 270K
R3DU 18K
R3DV 47K
R3DX 10K
R3DT 47K
TL301
TL302
TL303
TL304
TL305
TL307
TL310
TL311
TL312
TL313
GND(CMR) ⑰
GND(CMR) ⑯
BURST-L ⑮
VR-YPED ⑭
VB-YPED ⑬
BURST-P ⑫
CMR-Y ⑪
C5V ⑩
C5V ⑨
R-Y ⑧
B-Y ⑦
1.8V ⑥
8.5V ⑤
-7V ④
18V ③
GND(18V) ②
GND(18V) ①
SB
VB TO PCB-VTR (CONTROL)
C3EB OPEN
C3EC Z-.1
C3EA OPEN
q u s k
R3EW 3.9K
R3EZ 1K
Q3AU IMX1
C3DD 100
R3FE 1K
Q3AV IMX1
C3DE 1000
D3AE ND411 G-2
R3FJ 2.7K
R3FP F-2K
R3FR 3.9K
R3EV 3.9K
R3EX 220
R3EY 1.8K
R3FB F-1.8K
R3FA F-180
R3FC F-1.8K
R3FD 10K
R3FF 1.2K
R3FG 100
C3DF Z-.1
R3MF 1K
C3DL Z-.01
R3FK 100
Q3AY
R3FH 3.9K
R3FM 1.5K
R3FN 100
Q3AW IMZ1/ XN4601
R3FQ 1.5K
R3FS 680
R3GV 470
C3DJ 220
D3MF ND411 G-2


IC3AB
⑮ ⑯ ⑤
AUTO BIAS
⑥
SOURCE
605 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
④
⑬
WAVE FORM SHAPER
φ1 DRIVER
φS DRIVER
TIMING CONT
φ2 DRIVER
φR DRIVER
BIAS GEN
φSH DRIVER
φSH DRIVER
① ⑩


IC3AC
⑥ ③ ⑮
AUTO BIAS
⑦
SOURCE
201.5 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
②
⑨
SOURCE
201.5 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
⑯
⑪
SOURCE
201.5 bit ANALOG SHIFT REGISTER
DET
RE SAMPRING OUT BUFFER
⑭
⑧
WAVE FORM SHAPER
DIV
φ1 DRIVER
φS DRIVER
φR DRIVER
TIMING CONT
φ2 DRIVER
φSH DRIVER
φSH DRIVER
① ⑩

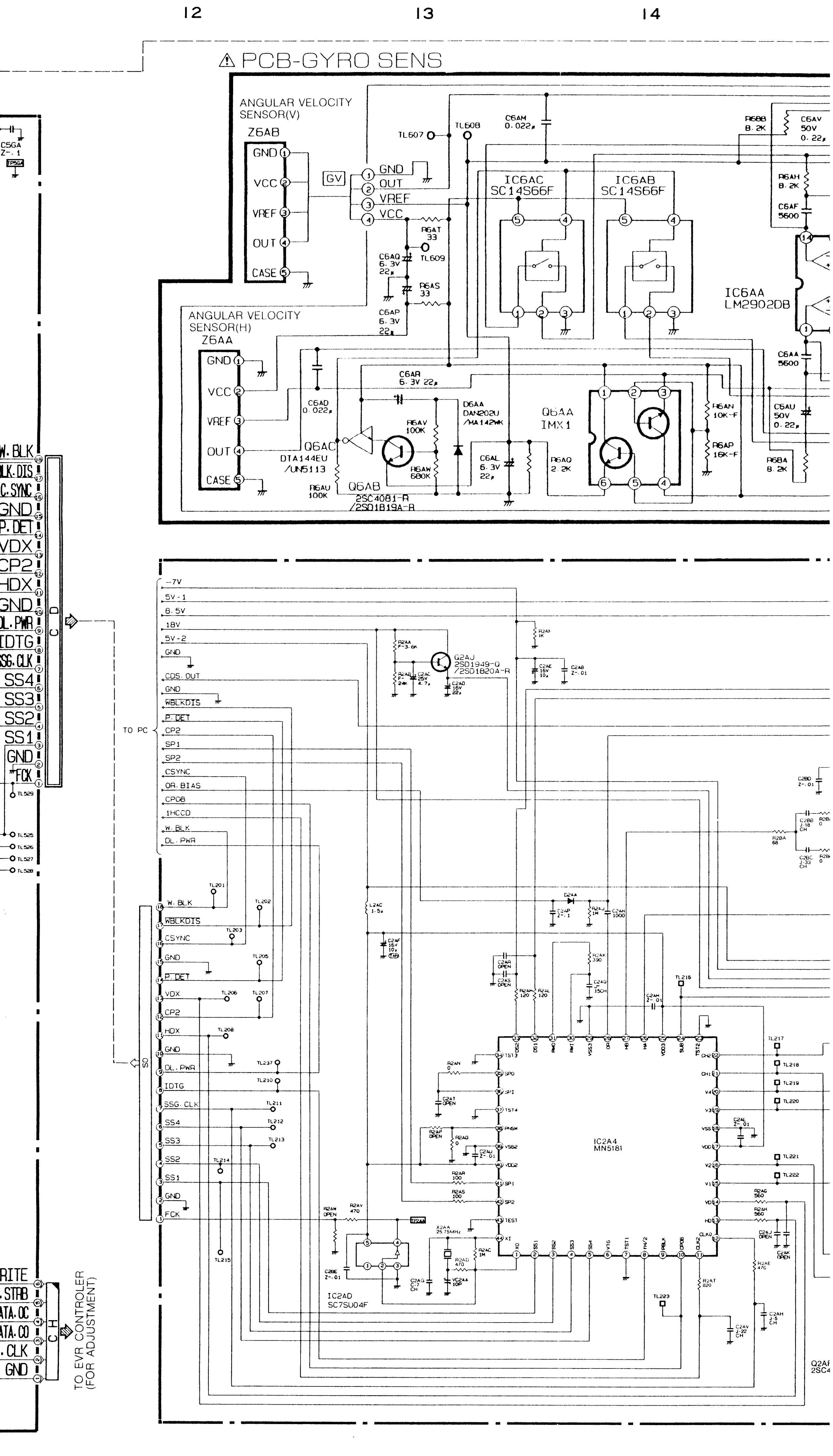

1
2
3
4
5
6
A
B
C
D
E
F
G
(PROCESS
⚠ PCB-CM(CAMERA CONTROL)
LENS UNIT
ZOOM MOTOR
FOCUS ENCODER
IRIS COIL
ZOOM ENCODER
HOLL SENSER
FOCUS MOTOR
IC5FA
TB6503AF
IC5ZA
TK10501M
IC5AC
LM2902DB
IC5AE
LM2901DB
IC5EA
Q5AE
FMA2
/XN1113
Q5AG
FMG2
/XN1213
Q5KM
IMT1
Q5LB
Q5LC
DTA114EU
/UN5111
IC5AB
LM2904DB
Q5AA
2SC4098-P
2SC3936-B
Q5AC
IMX1
Q5AB
DTA114EU
/UN5111
IC5LA
LM2902DB
D5LA
DAP202U
MA142WA
U1GWJ44
X4
GND
GND
DAC.CLK
DAC.LAT
DAC.DAT
GA.HLSB
FADE
WB.REF
1.8V
1.8V
R-Y
C5V
B-Y
ZMT(+)
ZMT(-)
ZMP.1
ZMP
ZMP.0
LED(+)
F.ENC
LED(-)
FMT.2
FMT.4
FMT.1
FMT.3
H.IN(+)
H.OUT(-)
H.IN(-)
H.OUT(+)
BRK(-)
BRK(+)
DRV(-)
DRV(+)
CB
C5V
D5V
A5V
1.8V
DRV
DRV(+)
ALC.DET
ALC.CONT
BRK
I.HOLE.IN
FCS.CW
FCS.CLK
ZM.D1
ZM.D0
ZM.SPD
FCS.EBL
FCS.RST
UNREG
GND(URG)
RST.FL
LED.ON
BF

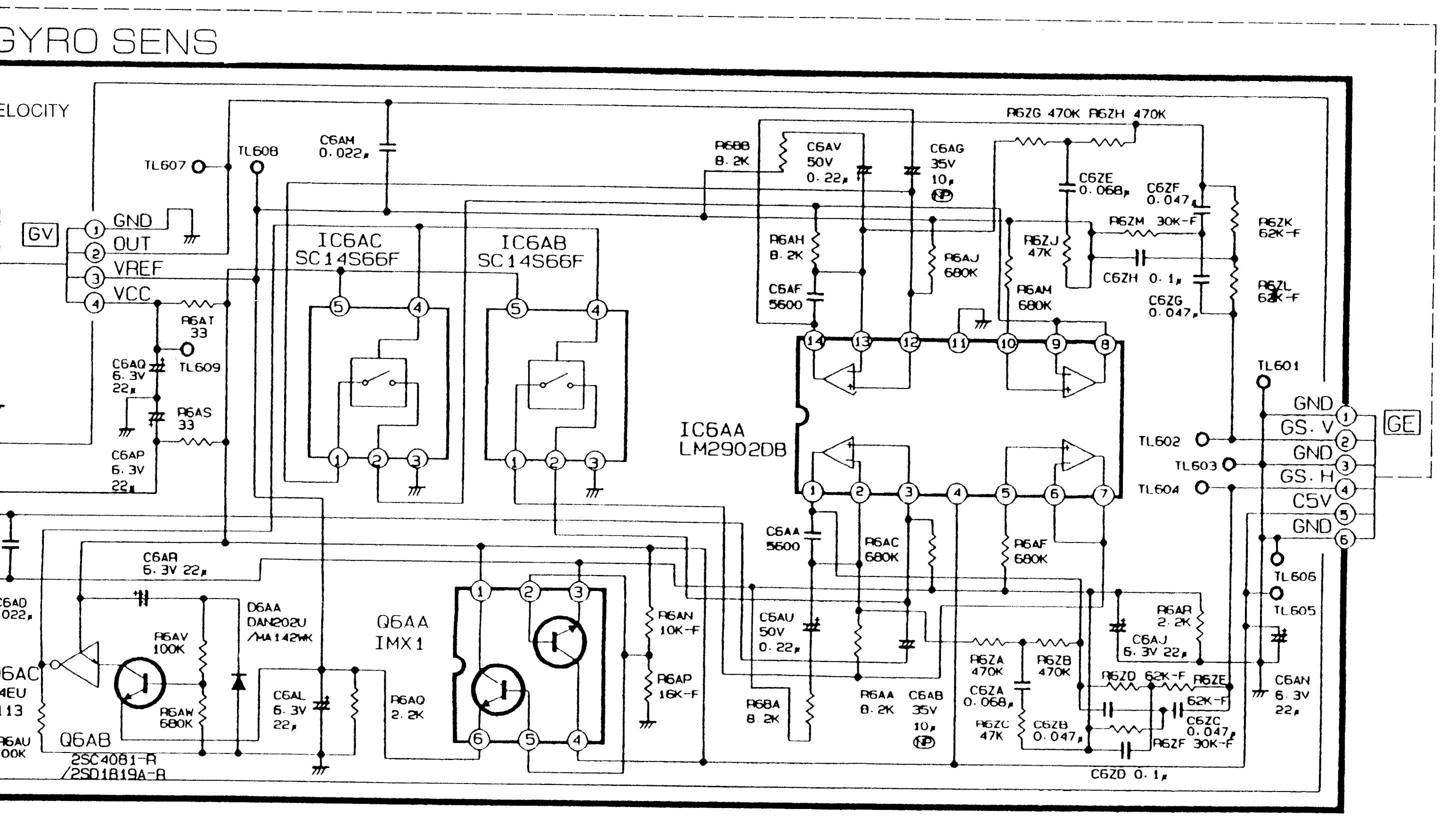

6
7
8
9
10
11
(PROCESS)PCB-SD/PC
SC
CC
CE
IC5EA
S2918IF
Q5GA
IMX1
D5CA DAN202U/MA142WK
C5V(D)
C5V(A)
1.8V
A5V
D5V
IC5GA
CF79114
IC5AA
M37450M8-470FP
IC4AA
MN73033XRA
IC5RA
PST529CMT
Q5FA
Q5FB 2SC4098-Q/2SC3936-C
Q5FC 2SC4098-Q/2SC3936-C
Q5FD 2SC4098-Q/2SC3936-C
D5FE DAP202U/MA142WA
LF5AA TH354LAI-5592
Q5FG
Q5FJ 2SD1819A-S
Q5FK 2SD1819A-S
Q5FL 2SB1218-S
W.BLK
WBLK.DIS
C.SYNC
GND
P.DET
VDX
CP2
HDX
GND
DL.PWR
IDTG
SSG.CLK
SS4
SS3
SS2
SS1
GND
FCK
CD
TO PC
SD
WRITE
C.STRB
DATA.OC
DATA.CO
C.CLK
GND
CH
TO EVR CONTROLER (FOR ADJUSTMENT)
HD
DL.PWR
P.DET
VD
C.STRB
LED.ON
BF
UNREG
GND(URG)
DATA.CO
DATA.OC
C.CLK
Z5AA 1A
GND(URG)
GND(URG)
DAC.DAT.V
DAC.CLK
DAC.LAT
CP2
BF
VD
HD
C.STRB
C.CLK
DATA.CO
DATA.OC
UNREG
UNREG
CA
VA
PCB-VTR(TELOP)

(CAMERA CONTROL)

NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

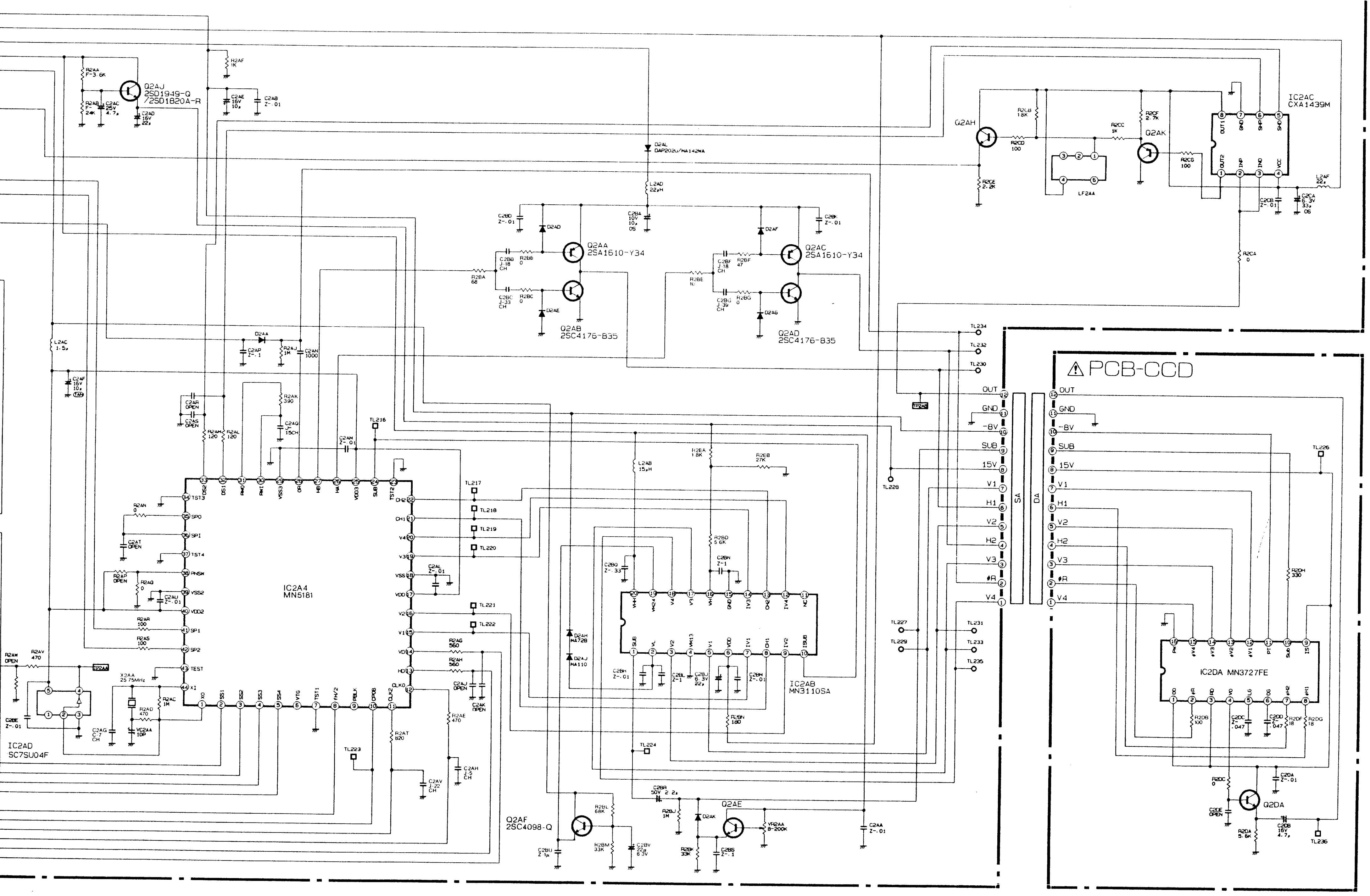
- ● PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ● NPN TRANSISTORS ARE 2SC4081-R/2SD1819A-R
- ● PNP DIGITAL TRANSISTORS ARE DTA144EU/UN5113
- ● NPN DIGITAL TRANSISTORS ARE DTC144EU/UN5213

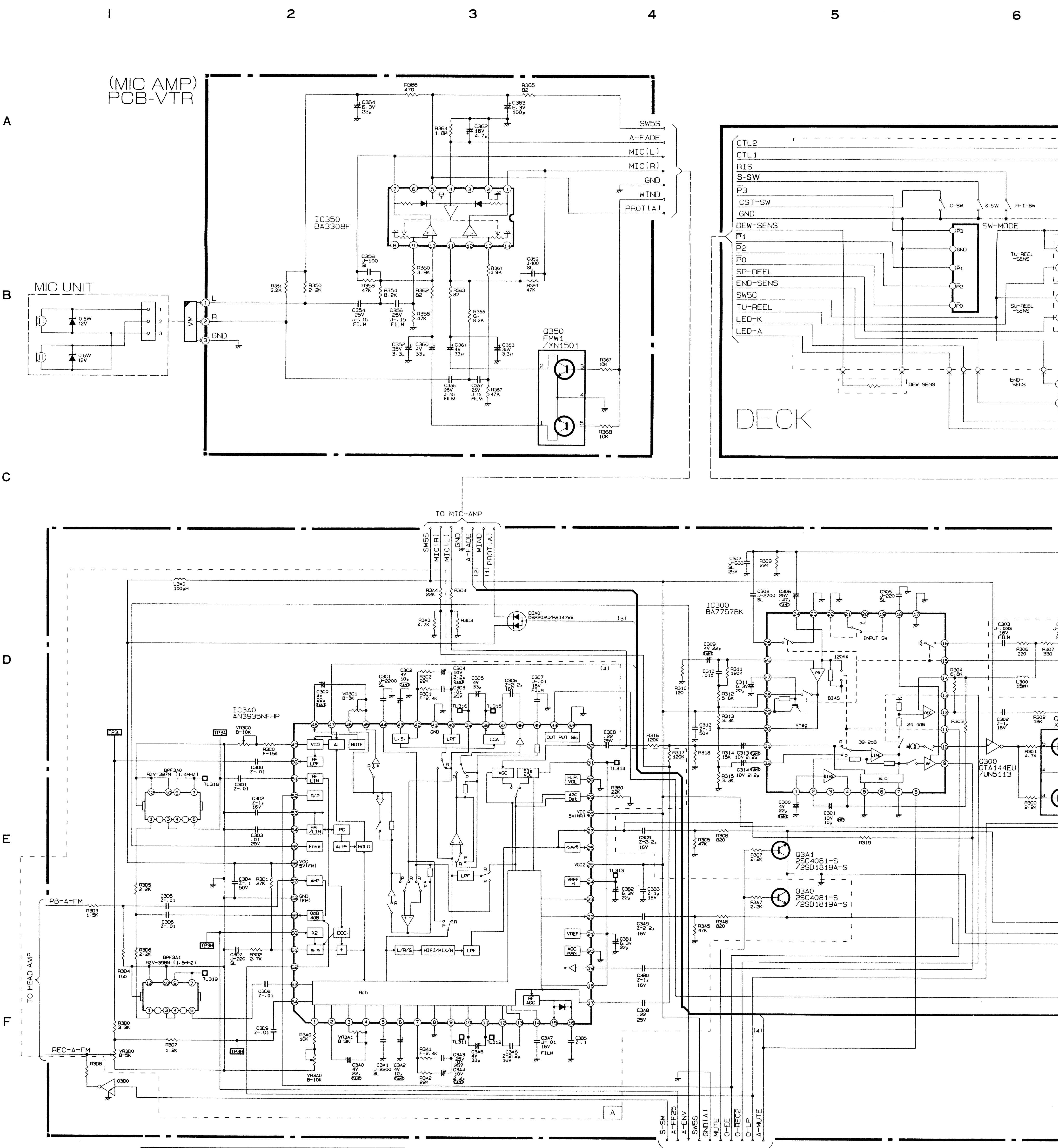

12
13
14
⚠ PCB-GYRO SENS
ANGULAR VELOCITY SENSOR(V)
Z6AB
GND
VCC
VREF
OUT
CASE
GV
GND
OUT
VREF
VCC
TL607
TL608
C6AM 0.022μ
IC6AC SC14S66F
IC6AB SC14S66F
R6BB 8.2K
C6AV 50V 0.22μ
R6AH 8.2K
C6AF 5600
IC6AA LM2902DB
R6AT 33
TL609
C6AQ 6.3V 22μ
R6AS 33
C6AP 6.3V 22μ
ANGULAR VELOCITY SENSOR(H)
Z6AA
C6AD 0.022μ
C6AR 6.3V 22μ
D6AA DAN202U /MA142WK
Q6AA IMX1
R6AN 10K-F
R6AP 16K-F
C6AA 5600
C6AU 50V 0.22μ
R6BA 8.2K
Q6AC DTA144EU /UN5113
R6AV 100K
R6AW 680K
C6AL 6.3V 22μ
R6AQ 2.2K
R6AU 100K
Q6AB 2SC4081-R /2SD1819A-R
W.BLK
WBLK.DIS
C.SYNC
GND
P.DET
VDX
CP2
HDX
GND
DL.PWR
IDTG
SSG.CLK
SS4
SS3
SS2
SS1
GND
FCK
CD
TL525
TL526
TL527
TL528
TL529
C5GA Z-.1
TO PC
-7V
5V-1
6.5V
18V
5V-2
GND
CDS.OUT
GND
WBLKDIS
P.DET
CP2
SP1
SP2
CSYNC
OR.BIAS
CP08
1HCCD
W.BLK
DL.PWR
R2AA F-3.6K
R2AB F-24K
C2AC 25V 4.7μ
Q2AJ 2SD1949-Q /2SD1820A-R
C2AD 16V 22μ
R2AF 1K
C2AE 16V 10μ
C2AB Z-.01
SD
TL201
TL202
TL203
TL205
TL206
TL207
TL208
TL237
TL210
TL211
TL212
TL213
TL214
TL215
L2AC 1.5μ
C2AF 16V 10μ
D2AA
C2AP Z-.1
R2AJ 1M
C2AN 1000
R2AK 390
C2AR OPEN
C2AS OPEN
R2AM 120
R2AL 120
C2AG 15CH
C2AH Z-.01
TL216
TL217
TL218
TL219
TL220
TL221
TL222
IC2A4 MN5181
C2AL Z-.01
R2AG 560
R2AH 560
C2AJ OPEN
C2AK OPEN
R2AE 470
R2AT 820
TL223
C2AV Z-.22 CH
C2AM 2.5 CH
X2AA 25.75MHz
R2AC 1M
R2AD 470
C2AA 10P
C2AQ 0.7 CH
C2AE Z-.01
R2AW OPEN
R2AV 470
IC2AD SC7SU04F
C2BD Z-.01
C2BB 2.18 CH
C2BC 2.33 CH
R2BA 68
WRITE
STRB
DATA.OC
DATA.CO
CLK
GND
CH
TO EVR CONTROLER (FOR ADJUSTMENT)
Q2AF 2SC4


GYRO SENS
ELOCITY
TL607
TL608
C6AM 0.022μ
GV
① GND
② OUT
③ VREF
④ VCC
IC6AC SC14S66F
IC6AB SC14S66F
R6AT 33
TL609
C6AQ 6.3V 22μ
R6AS 33
C6AP 6.3V 22μ
R6BB 8.2K
C6AV 50V 0.22μ
C6AG 35V 10μ NP
R6AH 8.2K
R6AJ 680K
C6AF 5600
R6GZG 470K R6ZH 470K
C6ZE 0.068μ
C6ZF 0.047μ
R6ZM 30K-F
R6ZJ 47K
C6ZH 0.1μ
R6AM 680K
C6ZG 0.047μ
R6ZK 62K-F
R6ZL 62K-F
IC6AA LM2902DB
TL601
GND ①
GS.V ②
GND ③
GS.H ④
C5V ⑤
GND ⑥
GE
TL602
TL603
TL604
TL606
TL605
C6AR 6.3V 22μ
C6AD 0.022μ
D6AA DAN202U /MA142WK
R6AV 100K
Q6AA IMX1
C6AA 5600
R6AC 680K
R6AF 680K
R6AN 10K-F
R6AP 16K-F
C6AU 50V 0.22μ
R6AR 2.2K
C6AJ 6.3V 22μ
C6AN 6.3V 22μ
R6AW 680K
C6AL 6.3V 22μ
R6AQ 2.2K
R6BA 8.2K
R6AA 8.2K
C6AB 35V 10μ NP
R6ZA 470K
C6ZA 0.068μ
R6ZB 470K
R6ZC 47K
C6ZB 0.047μ
R6ZD 62K-F
R6ZE 62K-F
C6ZC 0.047μ
R6ZF 30K-F
C6ZD 0.1μ
6AC
4EU
13
Q6AB 2SC4081-R /2SD1819A-R
6AU
00K

(SENSOR DRIVE)
NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

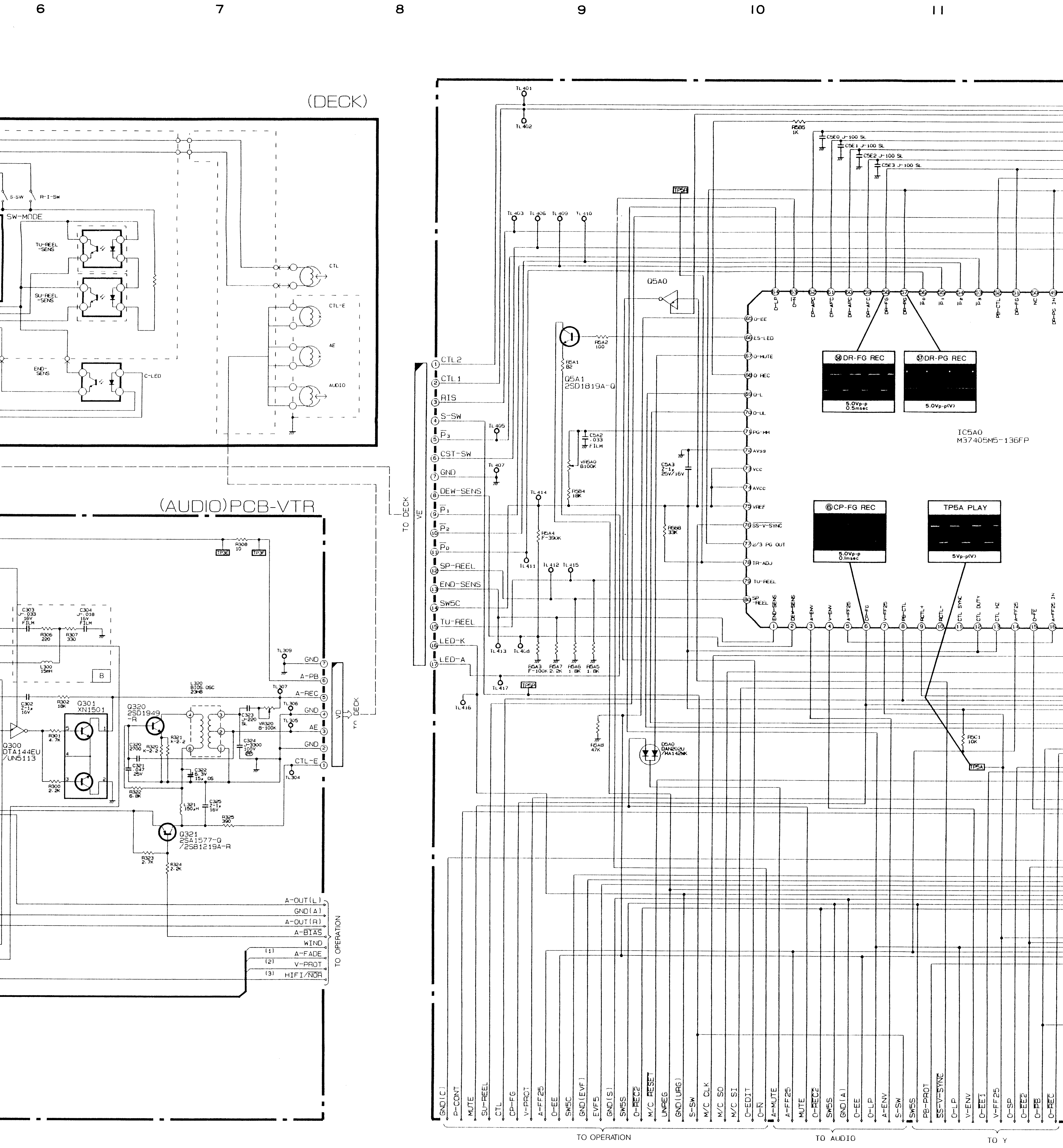
- ●DIODE ARE MA141K
- ●PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ●NPN TRANSISTORS ARE 2SC4098-Q/2SC3936-C

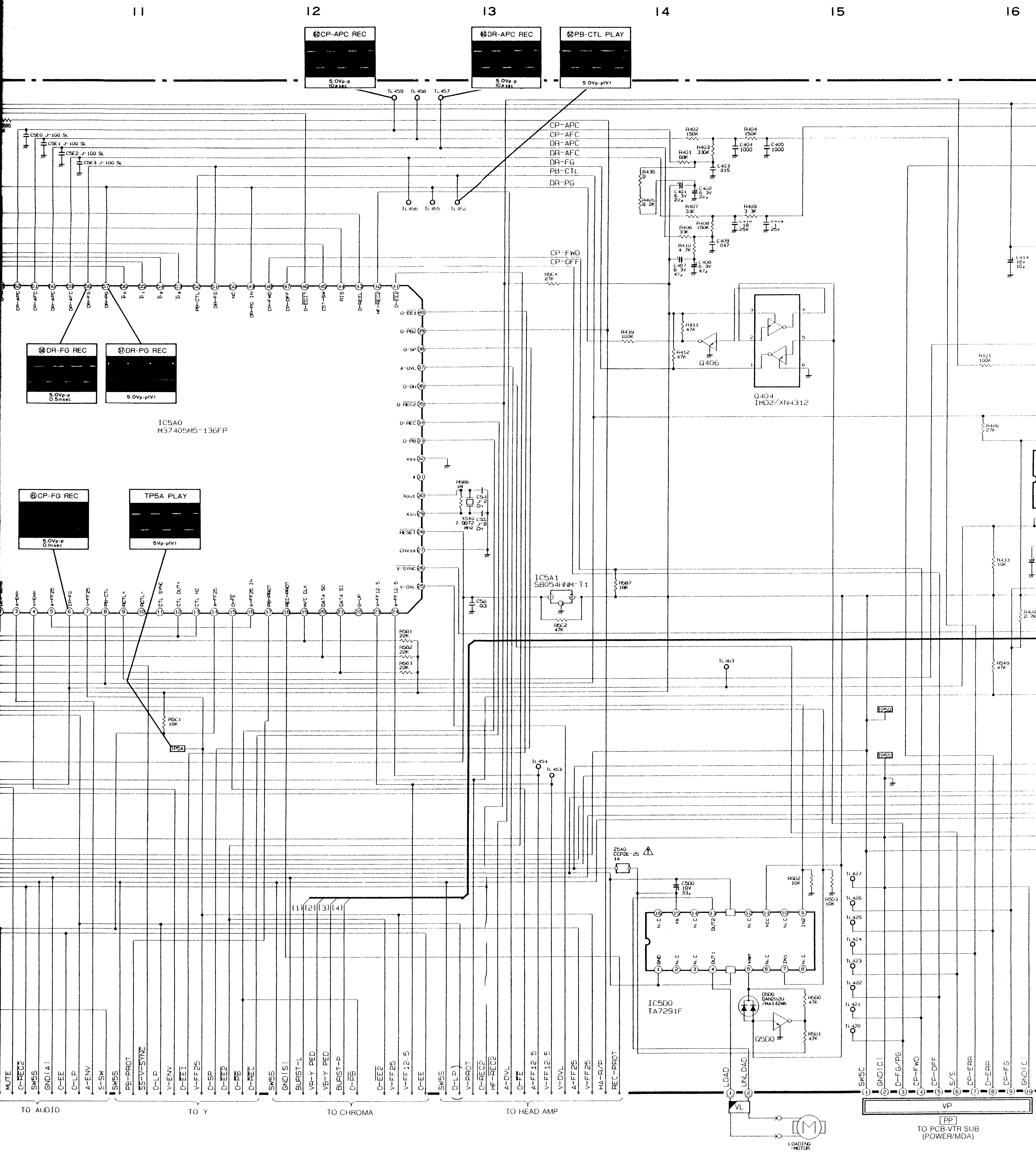

⚠
(SENSOR DRIVE)PCB-SD/PC
Q2AJ 2SD1949-Q /2SD1820A-R
D2AL DAP202U/MA142WA
L2AD 22μH
Q2AA 2SA1610-Y34
Q2AC 2SA1610-Y34
Q2AB 2SC4176-B35
Q2AD 2SC4176-B35
D2AA
IC2A4 MN5181
IC2AB MN3110SA
IC2AD SC7SU04F
X2AA 25.75MHz
Q2AF 2SC4098-Q
Q2AE
VR2AA B-200K
Q2AH
Q2AK
LF2AA
IC2AC CXA1439M
⚠ PCB-CCD
OUT
GND
-8V
SUB
15V
V1
H1
V2
H2
V3
φR
V4
SA
DA
IC2DA MN3727FE
Q2DA
TL226
TL236

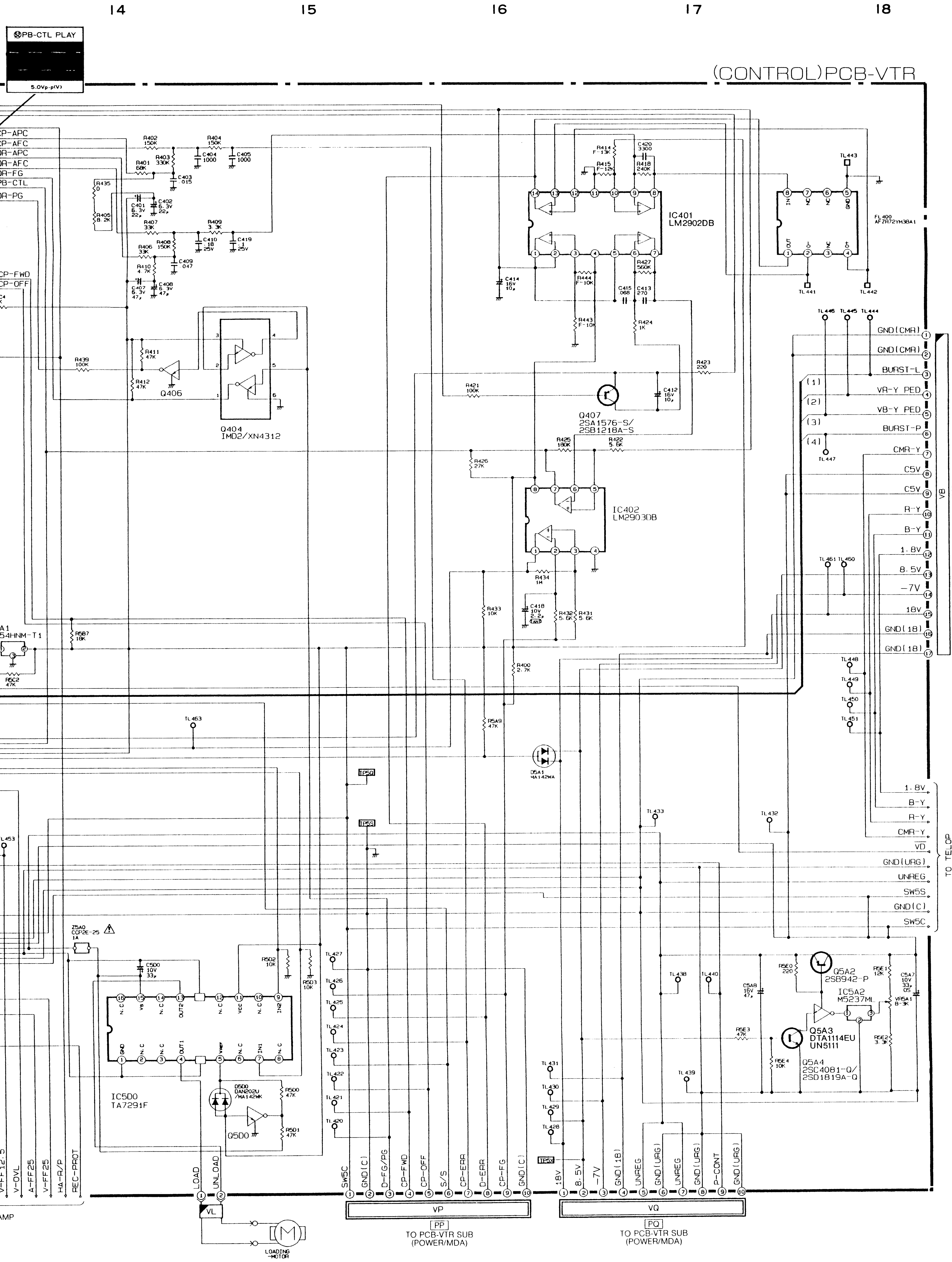

1
2
3
4
5
6
A
B
C
D
E
F
G
(MIC AMP)
PCB-VTR
MIC UNIT
0.5W 12V
VM
L
R
GND
IC350
BA3308F
Q350
FMW1
/XN1501
SW5S
A-FADE
MIC(L)
MIC(R)
GND
WIND
PROT(A)
DECK
CTL2
CTL1
RIS
S-SW
P3
CST-SW
GND
DEW-SENS
P1
P2
P0
SP-REEL
END-SENS
SW5C
TU-REEL
LED-K
LED-A
C-SW
S-SW
R-I-SW
SW-MODE
TU-REEL -SENS
SU-REEL -SENS
DEW-SENS
END-SENS
TO MIC-AMP
IC3A0
AN3935NFHP
IC300
BA7757BK
D3A0
DAP202U/MA142WA
Q3A1
2SC4081-S
/2SD1819A-S
Q3A0
2SC4081-S
/2SD1819A-S
Q300
DTA144EU
/UN5113
BPF3A0
RZV-397N (1.4MHZ)
BPF3A1
RZV-398N (1.8MHZ)
PB-A-FM
REC-A-FM
TO HEAD AMP
INPUT SW
BIAS
ALC
Vreg
S-SW
A-FF25
A-ENV
SW5S
GND(A)
MUTE
O-EE
O-REC2
O-LP
A-MUTE
TO CONTROL
A

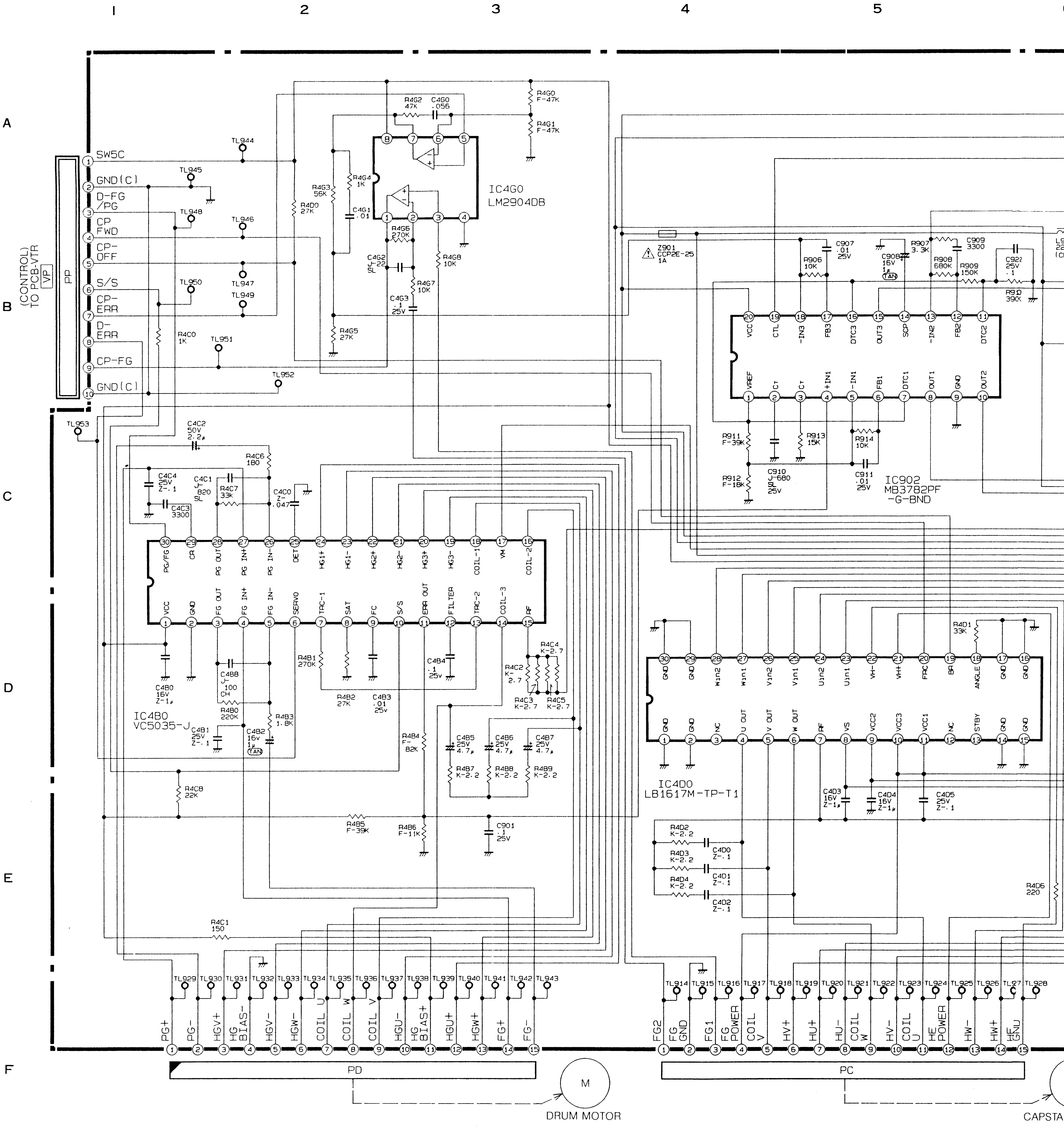
| SYMBOL NO. / MODEL | R318 | R3C4 | R3C3 | R319 | A AREA | B AREA | R3D8 | Q3D0 | R303 |
|---|---|---|---|---|---|---|---|---|---|
| HS-CX7 | 3.9K | 22K | 4.7K | × | ○ | × | 4.7K | ○ | 470 |

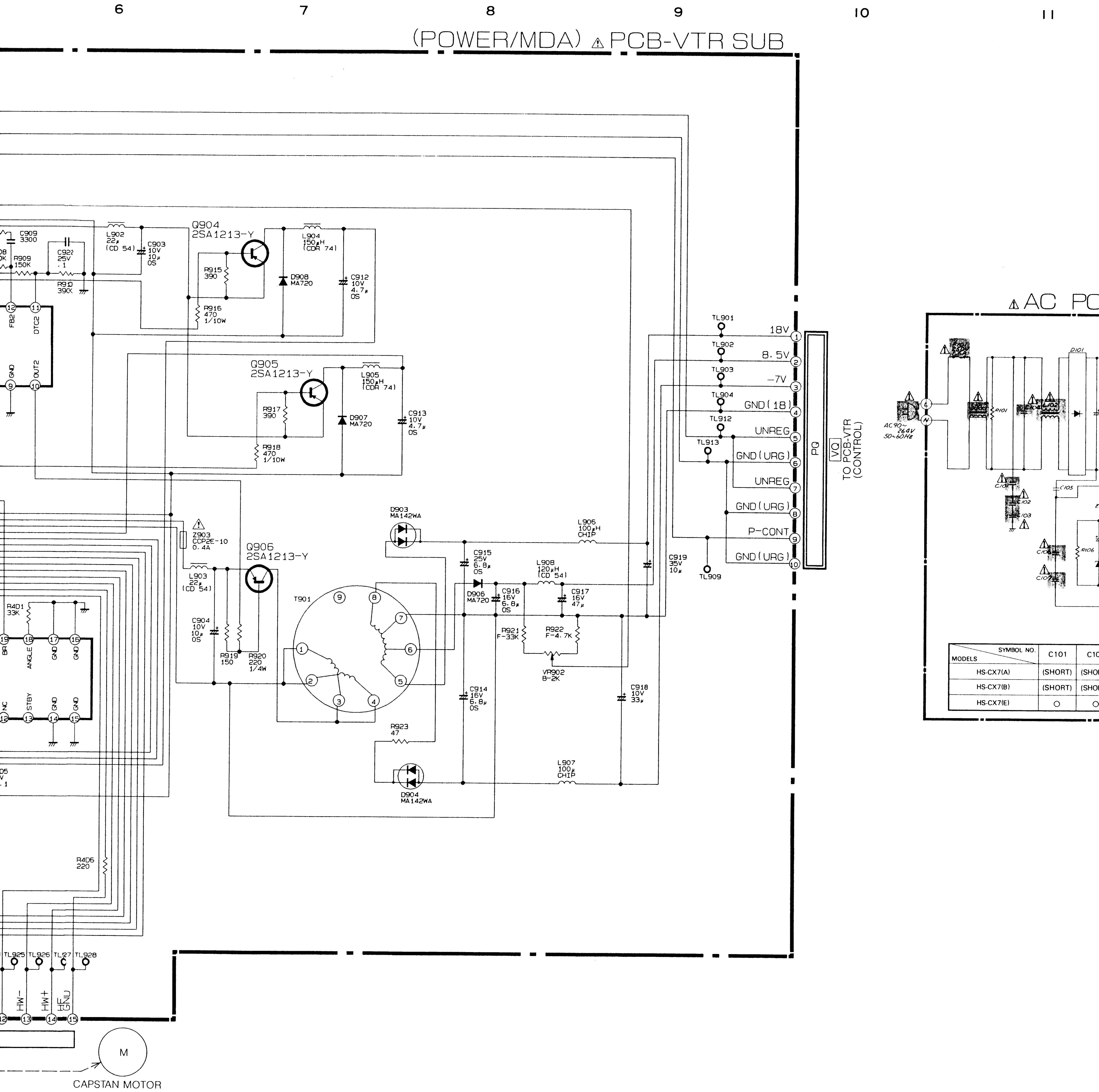
○ : Employed
× : Not employed


6
7
8
9
10
11
(DECK)
S-SW
R-I-SW
SW-MODE
TU-REEL-SENS
SU-REEL-SENS
END-SENS
C-LED
CTL
CTL-E
AE
AUDIO
(AUDIO)PCB-VTR
TO DECK
VE
VD
TO DECK
CTL2
CTL1
RIS
S-SW
P3
CST-SW
GND
DEW-SENS
P1
P2
P0
SP-REEL
END-SENS
SW5C
TU-REEL
LED-K
LED-A
GND
A-PB
A-REC
GND
AE
GND
CTL-E
Q301 XN1501
Q300 DTA144EU /UN5113
Q320 2SD1949
Q321 2SA1577-Q /2SB1219A-R
L320 BIOS OSC
VR320 B-100K
A-OUT(L)
GND(A)
A-OUT(R)
A-BIAS
WIND
A-FADE
V-PROT
HIFI/NOR
TO OPERATION
Q5A0
Q5A1 2SD1819A-Q
D5A0 DAN202U /MA142WK
TP5A
TP5B
IC5A0 M37405M5-136FP
58 DR-FG REC
5.0Vp-p 0.5msec
57 DR-PG REC
5.0Vp-p(V)
6 CP-FG REC
5.0Vp-p 0.1msec
TP5A PLAY
5Vp-p(V)
O-EE
ES-LED
O-MUTE
O-REC
O-L
O-UL
PG-MM
AVSS
VCC
AVCC
VREF
SS-V-SYNC
2/3 PG OUT
TR-ADJ
TU-REEL
SP-REEL
END-SENS
DEW-SENS
A-ENV
V-ENV
A-FF25
CP-FG
V-FF25
PB-CTL
GND(C)
P-CONT
MUTE
SU-REEL
CTL
CP-FG
V-PROT
A-FF25
O-EE
SW5C
GND(EVF)
EVF5
GND(S)
SW5S
O-REC2
M/C RESET
UNREG
GND(URG)
S-SW
M/C CLK
M/C SO
M/C SI
O-EDIT
O-N
A-MUTE
A-FF25
MUTE
O-REC2
SW5S
GND(A)
O-EE
O-LP
A-ENV
S-SW
SW5S
PB-PROT
SS-V-SYNC
O-LP
V-ENV
O-EE1
V-FF25
O-SP
O-EE2
O-PB
O-REC
TO OPERATION
TO AUDIO
TO Y

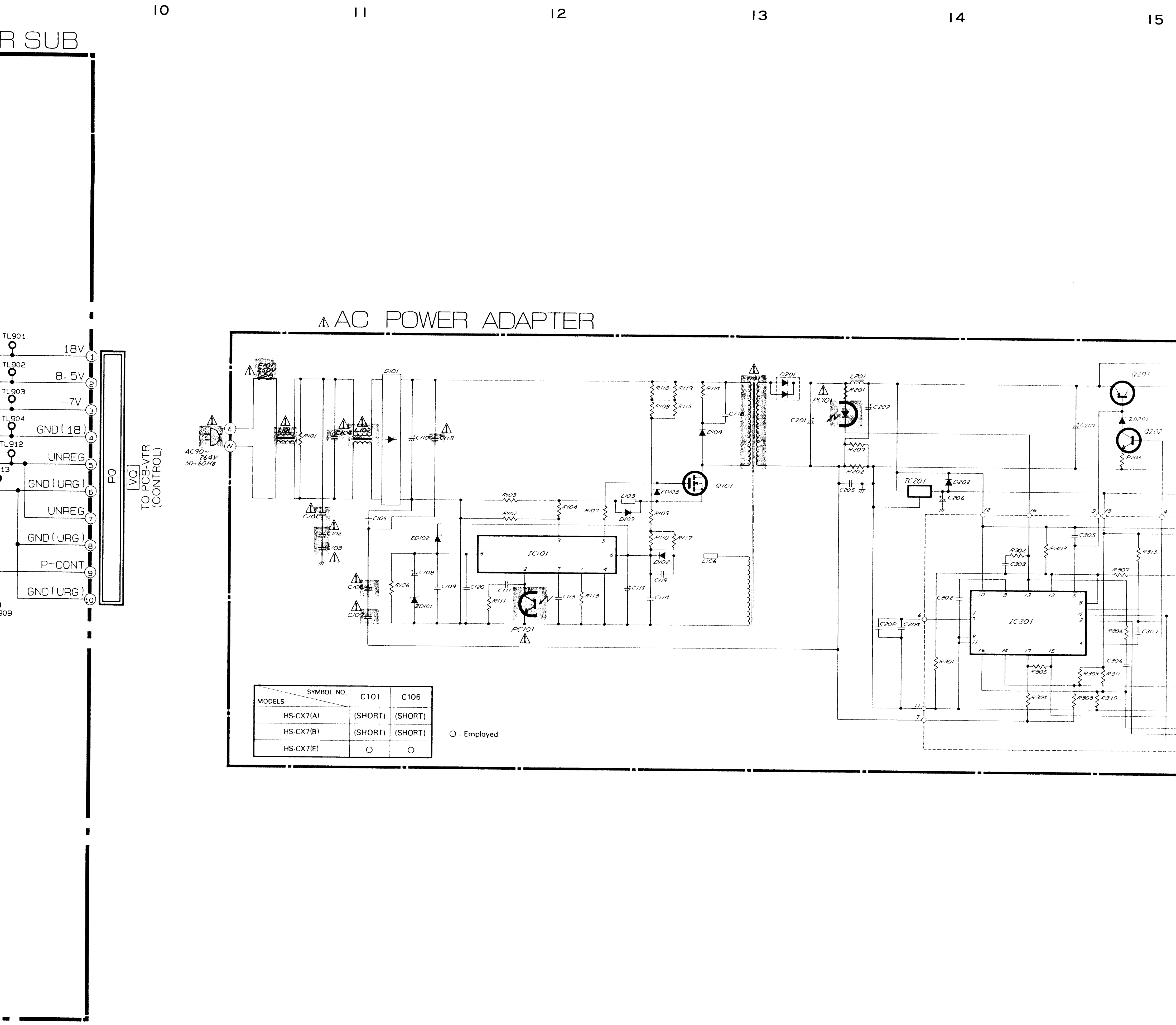

11
12
13
14
15
16
62 CP-APC REC
5.0Vp-p 10msec
63 DR-APC REC
5.0Vp-p 10msec
52 PB-CTL PLAY
5.0Vp-p(V)
TL459
TL458
TL457
TL456
TL455
TL452
CP-APC
CP-AFC
DR-APC
DR-AFC
DR-FG
PB-CTL
DR-PG
CP-FWD
CP-OFF
C5E0 J-100 SL
C5E1 J-100 SL
C5E2 J-100 SL
C5E3 J-100 SL
R402 150K
R404 150K
R401 68K
R403 330K
C404 1000
C405 1000
C403 .015
R435 0
R405 8.2K
C401 6.3V 22
C402 6.3V 22
R407 33K
R409 3.3K
R406 33K
R408 150K
C410 16 25V
C419 1 25V
C409 .047
R410 4.7K
C407 6.3V 47
C408 6.3V 47
C414 16V 10
R5C4 27K
R439 100K
R411 47K
R412 47K
Q406
Q404 IMD2/XN4312
R421 100K
R426 27K
58 DR-FG REC
5.0Vp-p 0.5msec
57 DR-PG REC
5.0Vp-p(V)
IC5A0
M37405M5-136FP
6 CP-FG REC
5.0Vp-p 0.1msec
TP5A PLAY
5Vp-p(V)
O-EE2
O-EE1
O-PB2
O-SP
A-OVL
O-ON
O-REC2
O-REC
O-PB
Vss
Xout
Xin
RESET
CNVss
V-SYNC
V-OVL
R5G6 1M
C54 2
X5A0 7.9872 MHz
C55 8
C5G 0.3
IC5A1
S8054HNM-T1
R5B7 18K
R5C2 47K
R433 10K
R400 2.7K
R5B1 22K
R5B2 22K
R5B3 22K
TL463
R5A9 47K
R5C1 10K
TP5A
TP5D
TP5S
TL454
TL453
(1)(2)(3)(4)
Z5A0 CCP2E-25 1A
C500 10V 33
R502 10K
R503 10K
IC5D0
TA7291F
D500 DAN202U /MA142WK
R500 47K
R501 47K
Q500
TL427
TL426
TL425
TL424
TL423
TL422
TL421
TL420
MUTE
O-REC2
SW5S
GND(A)
O-EE
O-LP
A-ENV
S-SW
SW5S
PB-PROT
SS-V-SYNC
O-LP
V-ENV
O-EE1
V-FF25
O-SP
O-EE2
O-PB
O-REC
SW5S
GND(S)
BURST-L
VR-Y PED
VB-Y PED
BURST-P
O-PB
O-EE2
V-FF25
V-FF12.5
O-EE
SW5S
O-LP
V-PROT
O-REC2
HF-REC2
A-OVL
O-FE
A-FF12.5
V-FF12.5
V-OVL
A-FF25
V-FF25
HA-R/P
REC-PROT
TO AUDIO
TO Y
TO CHROMA
TO HEAD AMP
LOAD
UNLOAD
VL
LOADING MOTOR
SW5C
GND(C)
D-FG/PG
CP-FWD
CP-OFF
S/S
CP-ERR
D-ERR
CP-FG
GND(C)
VP
PP
TO PCB-VTR SUB (POWER/MDA)


14
15
16
17
18
PB-CTL PLAY
5.0Vp-p(V)
(CONTROL)PCB-VTR
CP-APC
CP-AFC
DR-APC
DR-AFC
DR-FG
PB-CTL
DR-PG
CP-FWD
CP-OFF
R402 150K
R404 150K
C404 1000
C405 1000
R401 68K
R403 330K
C403 .015
R435 0
R405 8.2K
C401 6.3V 22µ
C402 6.3V 22µ
R407 33K
R409 3.3K
R408 150K
C410 .18 25V
C419 .1 25V
R406 33K
C409 .047
R410 4.7K
C407 6.3V 47µ
C408 6.3V 47µ
R439 100K
R411 47K
R412 47K
Q406
Q404 IMD2/XN4312
R414 F-13K
C420 3300
R415 F-12K
R418 240K
IC401 LM2902DB
C414 16V 10µ
R444 F-10K
R427 560K
C415 .068
C413 270
R443 F-10K
R424 1K
R423 220
R421 100K
Q407 2SA1576-S/ 2SB1218A-S
C412 16V 10µ
R425 180K
R422 5.6K
R426 27K
IC402 LM2903DB
R434 1M
C418 10V 2.2µ
R432 5.6K
R431 5.6K
R433 10K
R400 2.7K
R5A9 47K
D5A1 MA142WA
R5B7 18K
R5C2 47K
54HNM-T1
TL443
FL400 AF2R72YH38A1
TL441
TL442
TL446 TL445 TL444
GND(CMR) ①
GND(CMR) ②
BURST-L ③
VR-Y PED ④
VB-Y PED ⑤
BURST-P ⑥
CMR-Y ⑦
C5V ⑧
C5V ⑨
R-Y ⑩
B-Y ⑪
1.8V ⑫
8.5V ⑬
-7V ⑭
18V ⑮
GND(18) ⑯
GND(18) ⑰
(1) (2) (3) (4)
TL447
VB
SB
TO PCB-SD/PC (PROCESS)
TL461 TL460
TL448 TL449 TL450 TL451
TL463
TP50
TP55
TL453
TL433
TL432
1.8V
B-Y
R-Y
CMR-Y
VD
GND(URG)
UNREG
SW5S
GND(C)
SW5C
TO TELOP
Z5A0 CCP2E-25 1A
C500 10V 33µ
R502 10K
R503 10K
IC5D0 TA7291F
D5D0 DAN202U /MA142WK
R500 47K
R501 47K
Q5D0
TL427 TL426 TL425 TL424 TL423 TL422 TL421 TL420
TL431 TL430 TL429 TL428
TP5X
TL438 TL440
C5A8 16V 47µ
R5E0 220
Q5A2 2SB942-P
R5E1 12K
C5A7 10V 33µ OS
IC5A2 M5237ML
VR5A1 B-3K
R5E3 47K
Q5A3 DTA1114EU UN5111
R5E4 10K
Q5A4 2SC4081-Q/ 2SD1819A-Q
R5E2 3.3K
TL439
V-FF12.5
V-OVL
A-FF25
V-FF25
HA-R/P
REC-PROT
AMP
LOAD
UNLOAD
VL
LOADING-MOTOR
SW5C ① GND(C) ② D-FG/PG ③ CP-FWD ④ CP-OFF ⑤ S/S ⑥ CP-ERR ⑦ D-ERR ⑧ CP-FG ⑨ GND(C) ⑩
VP
PP
TO PCB-VTR SUB (POWER/MDA)
18V ① 8.5V ② -7V ③ GND(18) ④ UNREG ⑤ GND(URG) ⑥ UNREG ⑦ GND(URG) ⑧ P-CONT ⑨ GND(URG) ⑩
VQ
PQ
TO PCB-VTR SUB (POWER/MDA)


1
2
3
4
5
A
B
C
D
E
F
(CONTROL) TO PCB-VTR
VP
PP
SW5C
GND(C)
D-FG /PG
CP FWD
CP- OFF
S/S
CP- ERR
D- ERR
CP-FG
GND(C)
TL944
TL945
TL948
TL946
TL947
TL949
TL950
TL951
TL952
TL953
R4C0 1K
R4D0 27K
R4G3 56K
R4G4 1K
C4G1 .01
R4G2 47K
C4G0 .056
R4G0 F-47K
R4G1 F-47K
IC4G0
LM2904DB
R4G6 270K
C4G2 J-22 SL
R4G7 10K
R4G8 10K
C4G3 .1 25V
R4G5 27K
C4C2 50V 2.2μ
R4C6 180
C4C4 25V Z-.1
C4C1 J-820 SL
R4C7 33K
C4C0 Z-.047
C4C3 3300
PG/FG
CR
PG OUT
PG IN+
PG IN-
DET
HG1+
HG1-
HG2+
HG2-
HG3+
HG3-
COIL-1
VM
COIL-2
VCC
GND
FG OUT
FG IN+
FG IN-
SERVO
TRC-1
SAT
FC
S/S
ERR OUT
FILTER
TRC-2
COIL-3
RF
C4B0 16V Z-1μ
C4B8 J-100 CH
R4B0 220K
R4B3 1.8K
IC4B0
VC5035-J
C4B1 25V Z-.1
C4B2 16v 1μ TAN
R4B1 270K
R4B2 27K
C4B3 .01 25v
C4B4 .1 25v
R4C4 K-2.7
R4C2 K-2.7
R4C3 K-2.7
R4C5 K-2.7
R4B4 F-82K
C4B5 25V 4.7μ
C4B6 25V 4.7μ
C4B7 25V 4.7μ
R4B7 K-2.2
R4B8 K-2.2
R4B9 K-2.2
R4C8 22K
R4B5 F-39K
R4B6 F-11K
C901 .1 25V
R4C1 150
Z901 CCP2E-25 1A
C907 .01 25V
R906 10K
C908 16V 1μ TAN
R907 3.3K
C909 3300
R908 680K
R909 150K
C922 25V .1
R910 39K
VCC
CTL
-IN3
FB3
DTC3
OUT3
SCP
-IN2
FB2
DTC2
VREF
CT
CT
+IN1
-IN1
FB1
DTC1
OUT1
GND
OUT2
R911 F-39K
R913 15K
R914 10K
R912 F-18K
C910 J-680 SL 25V
C911 .01 25V
IC902
MB3782PF -G-BND
R4D1 33K
GND
GND
Win2
Win1
Vin2
Vin1
Uin2
Uin1
VH-
VH+
FRC
BR
ANGLE
GND
GND
GND
GND
NC
U OUT
V OUT
W OUT
RF
VS
VCC2
VCC3
VCC1
NC
STBY
GND
GND
IC4D0
LB1617M-TP-T1
C4D3 16V Z-1μ
C4D4 16V Z-1μ
C4D5 25V Z-.1
R4D2 K-2.2
C4D0 Z-.1
R4D3 K-2.2
C4D1 Z-.1
R4D4 K-2.2
C4D2 Z-.1
R4D6 220
TL929
TL930
TL931
TL932
TL933
TL934
TL935
TL936
TL937
TL938
TL939
TL940
TL941
TL942
TL943
PG+
PG-
HGV+
HG BIAS-
HGV-
HGW-
COIL U
COIL W
COIL V
HGU-
HG BIAS+
HGU+
HGW+
FG+
FG-
PD
M
DRUM MOTOR
TL914
TL915
TL916
TL917
TL918
TL919
TL920
TL921
TL922
TL923
TL924
TL925
TL926
TL927
TL928
FG2
FG GND
FG1
FG POWER
COIL V
HV+
HU+
HU-
COIL W
HV-
COIL U
HE POWER
HW-
HW+
HE GND
PC
CAPSTA

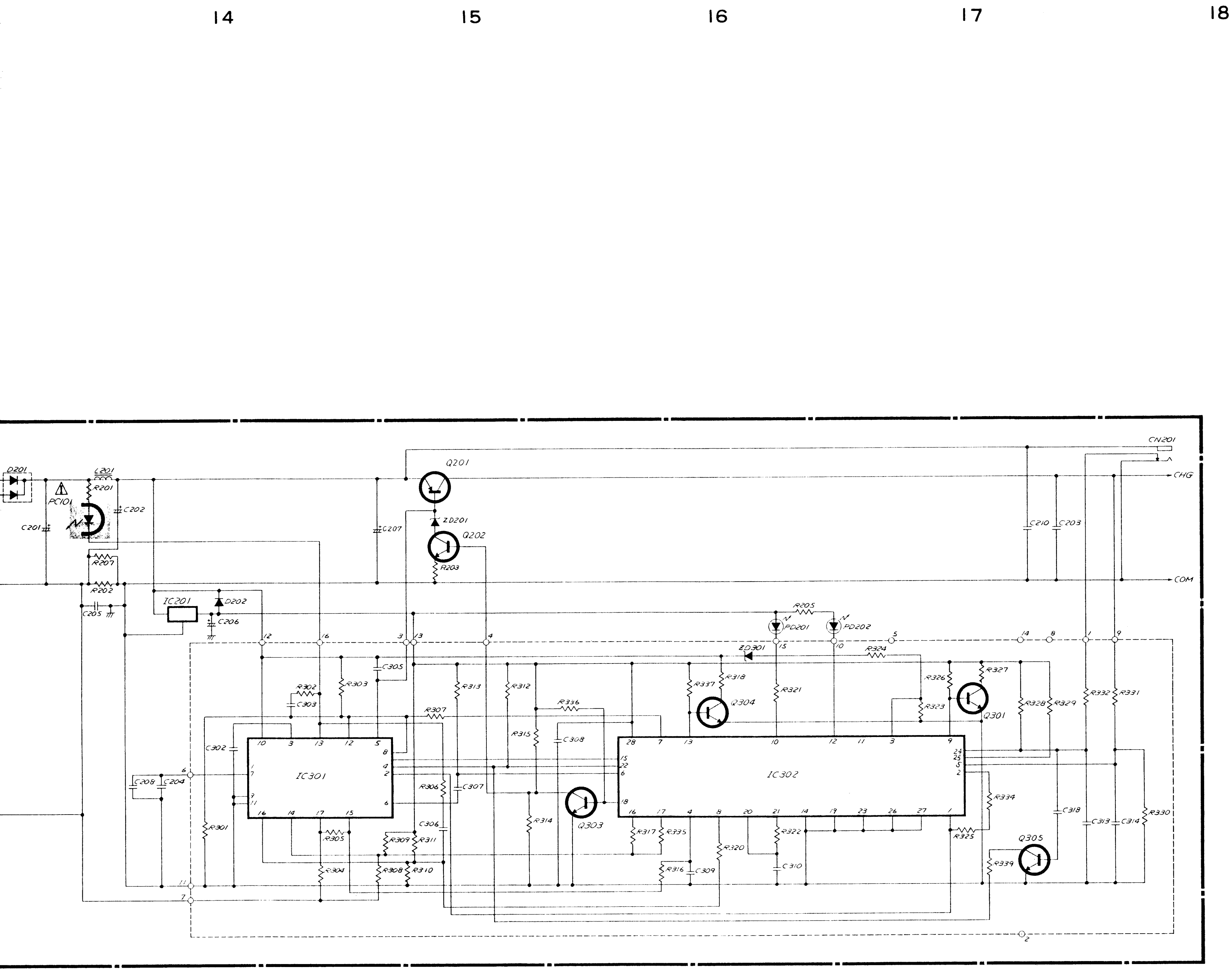

6
7
8
9
10
11
(POWER/MDA) ⚠ PCB-VTR SUB
⚠ AC PC
C909
3300
R909
150K
C922
25V
.1
R910
390K
L902
22µ
(CD 54)
C903
10V
10µ
OS
Q904
2SA1213-Y
R915
390
R916
470
1/10W
L904
150µH
(CDR 74)
D908
MA720
C912
10V
4.7µ
OS
FB2
DTC2
GND
OUT2
Q905
2SA1213-Y
R917
390
R918
470
1/10W
L905
150µH
(CDR 74)
D907
MA720
C913
10V
4.7µ
OS
⚠
Z903
CCP2E-10
0.4A
Q906
2SA1213-Y
L903
22µ
(CD 54)
C904
10V
10µ
OS
R919
150
R920
220
1/4W
T901
D903
MA142WA
D904
MA142WA
R923
47
C915
25V
6.8µ
OS
D906
MA720
C916
16V
6.8µ
OS
L908
120µH
(CD 54)
C917
16V
47µ
R921
F-33K
R922
F-4.7K
VR902
B-2K
C914
16V
6.8µ
OS
L906
100µH
CHIP
L907
100µ
CHIP
C918
10V
33µ
C919
35V
10µ
TL901
TL902
TL903
TL904
TL912
TL913
TL909
18V
8.5V
-7V
GND(18)
UNREG
GND(URG)
UNREG
GND(URG)
P-CONT
GND(URG)
PQ
VQ
TO PCB-VTR
(CONTROL)
R4D1
33K
BR
ANGLE
GND
GND
NC
STBY
GND
GND
R4D6
220
TL925
TL926
TL927
TL928
HW-
HW+
HE GNU
M
CAPSTAN MOTOR
AC90~
264V
50~60Hz
D101
R101
L102
C101
C102
C103
C104
C105
C106
C107
R106

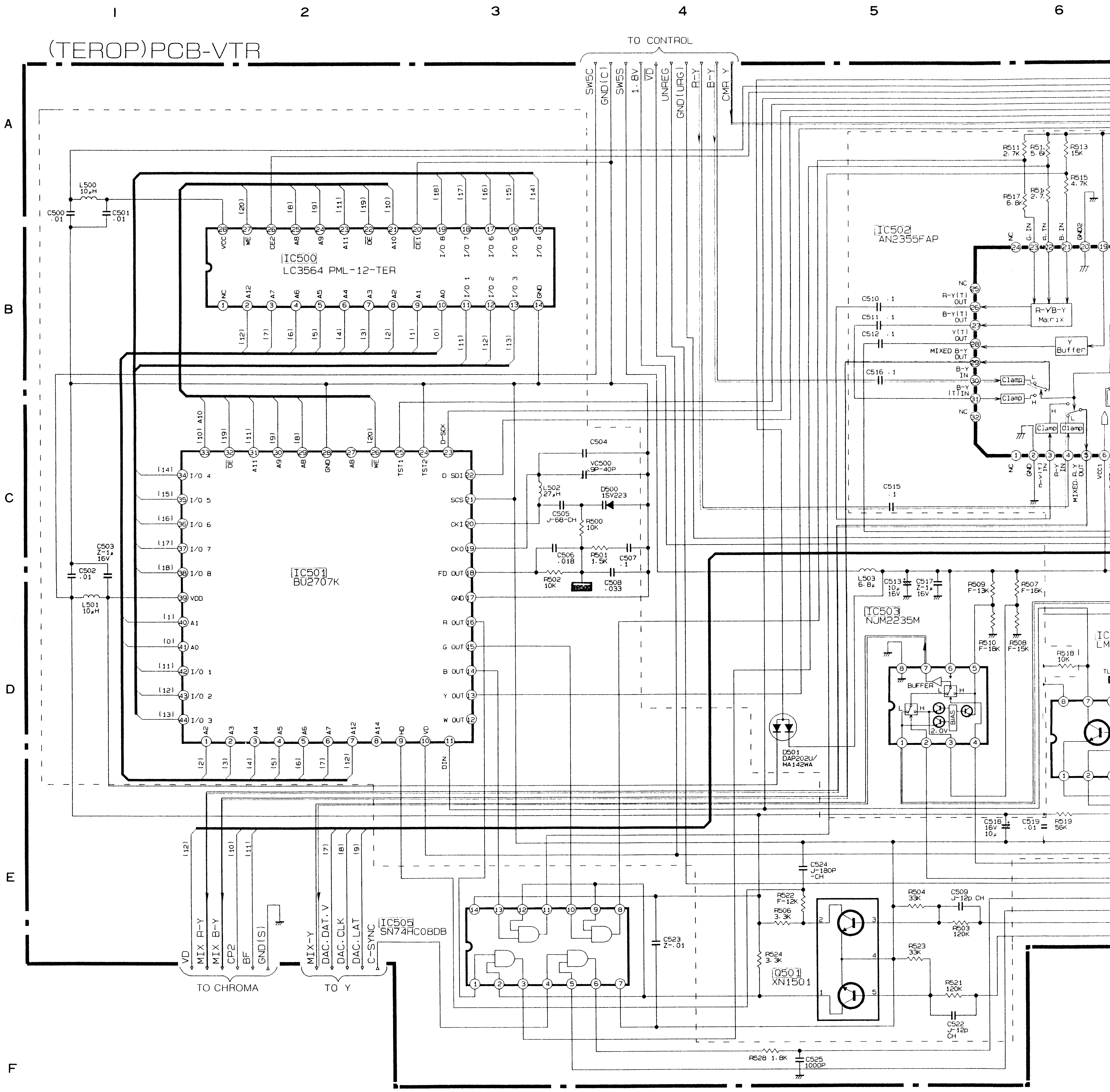
| SYMBOL NO. / MODELS | C101 | C10 |
|---|---|---|
| HS-CX7(A) | (SHORT) | (SHO |
| HS-CX7(B) | (SHORT) | (SHO |
| HS-CX7(E) | ○ | ○ |

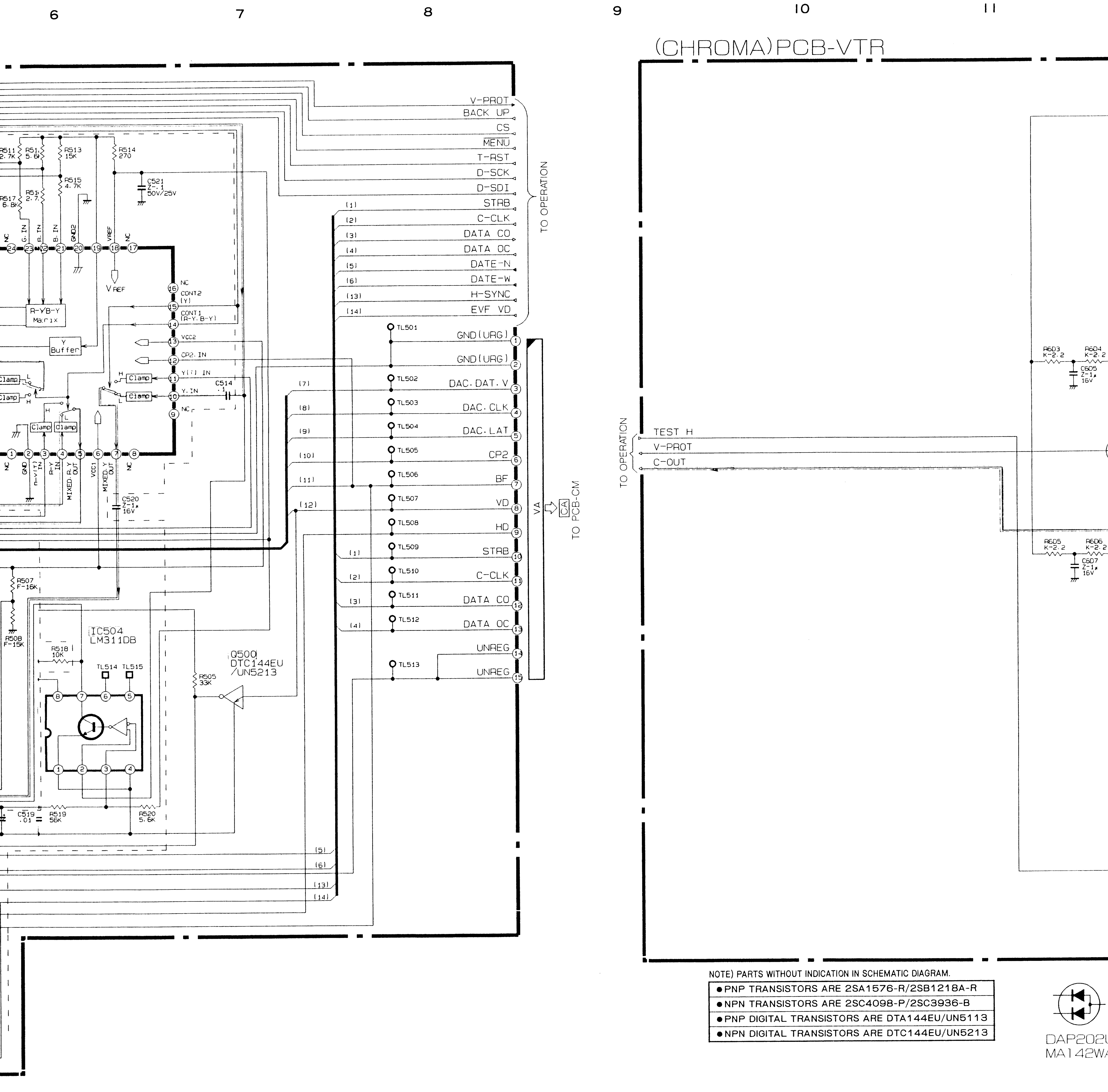

10
11
12
13
14
15
R SUB
TL901
18V
TL902
8. 5V
TL903
-7V
TL904
GND ( 18 )
TL912
UNREG
13
GND ( URG )
UNREG
GND ( URG )
P-CONT
GND ( URG )
909
PQ
VQ
TO PCB-VTR
(CONTROL)
AC POWER ADAPTER
AC90~264V
50~60Hz
F101
250V
1.6A
L101
R101
CK101
L102
D101
C117
C118
C101
C102
C103
C105
C106
C107
ZD102
R106
C108
ZD101
C109
C120
C111
R111
PC101
C113
R113
IC101
R103
R102
R104
R107
L103
D103
C115
C114
R118
R119
R114
R108
R115
C116
D104
ZD103
Q101
R109
R110
R117
D102
C119
L106
T101
D201
PC101
L201
R201
C201
C202
R207
R202
C205
IC201
D202
C206
C207
Q201
ZD201
Q202
R203
R302
R303
C303
C305
R313
R307
C302
IC301
R306
C307
C306
C208
C204
R301
R305
R309
R311
R304
R308
R310

| SYMBOL NO.<br>MODELS | C101 | C106 |
|---|---|---|
| HS-CX7(A) | (SHORT) | (SHORT) |
| HS-CX7(B) | (SHORT) | (SHORT) |
| HS-CX7(E) | ○ | ○ |

○ : Employed

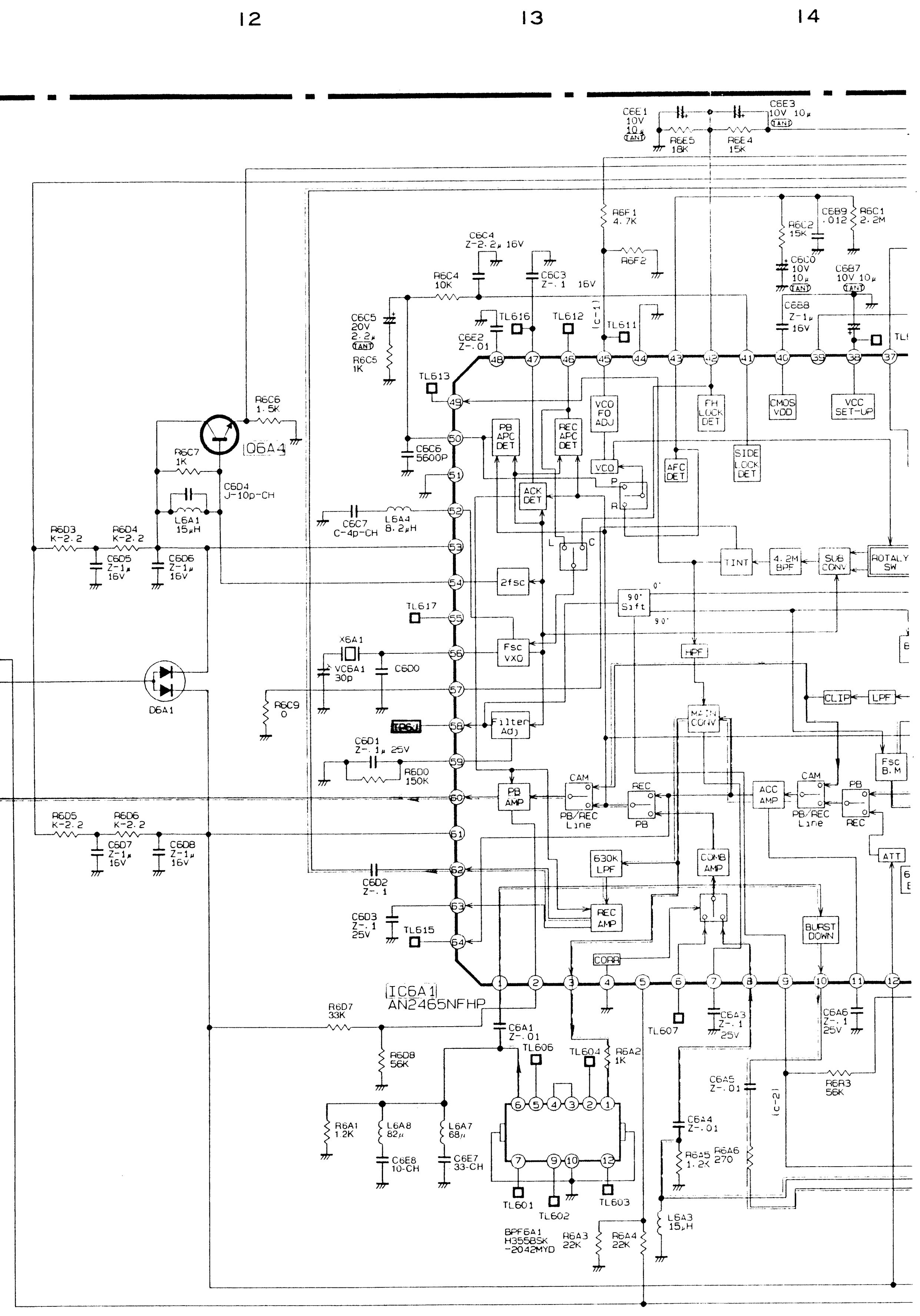

14
15
16
17
18
D201
L201
R201
PC101
C202
C201
R207
R202
C205
IC201
D202
C206
Q201
ZD201
Q202
R203
C207
C210
C203
CN201
CHG
COM
R205
PD201
PD202
ZD301
R324
C305
R302
R303
C303
R313
R312
R336
R307
R315
C308
C302
IC301
C208
C204
R306
C307
C306
R301
R305
R309
R311
R304
R308
R310
R314
Q303
R337
R318
Q304
R321
R326
R327
R323
Q301
R328
R329
R332
R331
IC302
R334
C318
C313
C314
R330
R317
R335
R316
C309
R320
R322
C310
R325
Q305
R339


(TEROP)PCB-VTR
1
2
3
4
5
6
A
B
C
D
E
F
TO CONTROL
SW5C
GND(C)
SW5S
1.8V
VD
UNREG
GND(URG)
R-Y
B-Y
CMR Y
IC500
LC3564 PML-12-TER
IC501
BU2707K
IC502
AN2355FAP
IC503
NJM2235M
IC505
SN74HC08DB
Q501
XN1501
D500
1SV223
D501
DAP202U/
MA142WA
L500 10μH
L501 10μH
L502 27μH
L503 6.8μ
C500 .01
C501 .01
C502 .01
C503 Z-1μ 16V
C504
VC500 SP-40P
C505 J-68-CH
C506 .018
C507 .1
C508 .033
C510 .1
C511 .1
C512 .1
C513 10μ 16V
C515 .1
C516 .1
C517 Z-1μ 16V
C518 16V 10μ
C519 .01
C522 J-12p CH
C523 Z-.01
C524 J-180P -CH
C525 1000P
C509 J-12p CH
R500 10K
R501 1.5K
R502 10K
R503 120K
R504 33K
R506 3.3K
R507 F-16K
R508 F-15K
R509 F-13K
R510 F-18K
R511 2.7K
R513 15K
R515 4.7K
R517 6.8K
R518 10K
R519 56K
R521 120K
R522 F-12K
R523 33K
R524 3.3K
R528 1.8K
R-Y(T) OUT
B-Y(T) OUT
Y(T) OUT
MIXED B-Y OUT
B-Y IN
B-Y (T) IN
R-YB-Y Matrix
Y Buffer
Clamp
BUFFER
BIAS
2.0V
D SDI
SCS
CKI
CKO
FD OUT
GND
R OUT
G OUT
B OUT
Y OUT
W OUT
VDD
I/O 1
I/O 2
I/O 3
I/O 4
I/O 5
I/O 6
I/O 7
I/O 8
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A14
HD
VD
DIN
TST1
TST2
D-SCK
WE
OE
CE1
CE2
VCC
NC
VD
MIX R-Y
MIX B-Y
CP2
BF
GND(S)
TO CHROMA
MIX-Y
DAC.DAT.V
DAC.CLK
DAC.LAT
C-SYNC
TO Y

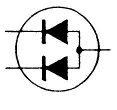

6
7
8
9
10
11
(CHROMA)PCB-VTR
V-PROT
BACK UP
CS
MENU
T-RST
D-SCK
D-SDI
STRB
C-CLK
DATA CO
DATA OC
DATE-N
DATE-W
H-SYNC
EVF VD
TO OPERATION
GND(URG)
GND(URG)
DAC.DAT.V
DAC.CLK
DAC.LAT
CP2
BF
VD
HD
STRB
C-CLK
DATA CO
DATA OC
UNREG
UNREG
TL501
TL502
TL503
TL504
TL505
TL506
TL507
TL508
TL509
TL510
TL511
TL512
TL513
VA
CA
TO PCB-CM
R511 2.7K
R513 15K
R514 270
R515 4.7K
R517 6.8K
C521 Z-1 50V/25V
G.IN
R.IN
B.IN
GND2
VREF
NC
V REF
CONT2 (Y)
CONT1 (R-Y.B-Y)
VCC2
CP2.IN
Y(?) IN
Y.IN
C514 .1
R-YB-Y Matrix
Y Buffer
Clamp
GND
R-Y IN
MIXED.R.Y OUT
VCC1
MIXED Y OUT
C520 Z-1 16V
R507 F-16K
R508 F-15K
IC504 LM311DB
R518 10K
TL514
TL515
Q500 DTC144EU /UN5213
R505 33K
C519 .01
R519 56K
R520 5.6K
TEST H
V-PROT
C-OUT
R603 K-2.2
R604 K-2.2
C605 Z-1 16V
R605 K-2.2
R606 K-2.2
C607 Z-1 16V
DAP202U
MA142WA

NOTE) PARTS WITHOUT INDICATION IN SCHEMATIC DIAGRAM.

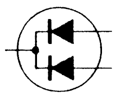
- ● PNP TRANSISTORS ARE 2SA1576-R/2SB1218A-R
- ● NPN TRANSISTORS ARE 2SC4098-P/2SC3936-B
- ● PNP DIGITAL TRANSISTORS ARE DTA144EU/UN5113
- ● NPN DIGITAL TRANSISTORS ARE DTC144EU/UN5213



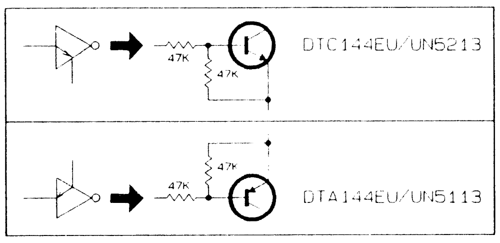
12
13
14
C6E1 10V 10μ TAN
R6E5 18K
R6E4 15K
C6E3 10V 10μ TAN
R6F1 4.7K
R6F2
C6C4 Z-2.2μ 16V
C6C3 Z-.1 16V
R6C4 10K
C6C5 20V 2.2μ TAN
R6C5 1K
C6E2 Z-.01
TL616
TL612
TL611
TL613
(c-1)
R6C2 15K
C6B9 .012
R6C1 2.2M
C6C0 10V 10μ TAN
C6B7 10V 10μ TAN
C6B8 Z-1μ 16V
R6C6 1.5K
Q6A4
R6C7 1K
C6D4 J-10p-CH
L6A1 15μH
C6C6 5600P
C6C7 C-4p-CH
L6A4 8.2μH
R6D3 K-2.2
R6D4 K-2.2
C6D5 Z-1μ 16V
C6D6 Z-1μ 16V
PB APC DET
REC APC DET
VCO FO ADJ
VCO
FH LOCK DET
AFC DET
SIDE LOCK DET
CMOS VDD
VCC SET-UP
ACK DET
2fsc
TINT
4.2M BPF
SUB CONV
ROTALY SW
90° Sift
HPF
Fsc VXO
Filter Adj
MAIN CONV
CLIP
LPF
Fsc B.M
TL617
X6A1
VC6A1 30p
C6D0
R6C9 0
TP6J
D6A1
C6D1 Z-.1μ 25V
R6D0 150K
PB AMP
CAM
REC
PB/REC Line
PB
ACC AMP
ATT
R6D5 K-2.2
R6D6 K-2.2
C6D7 Z-1μ 16V
C6D8 Z-1μ 16V
630K LPF
COMB AMP
C6D2 Z-.1
C6D3 Z-.1 25V
TL615
REC AMP
BURST DOWN
CORR
IC6A1
AN2465NFHP
R6D7 33K
R6D8 56K
C6A1 Z-.01
TL606
TL604
R6A2 1K
TL607
C6A3 Z-.1 25V
C6A6 Z-.1 25V
C6A5 Z-.01
R6R3 56K
(c-2)
C6A4 Z-.01
R6A5 1.2K
R6A6 270
R6A1 1.2K
L6A8 82μ
C6E8 10-CH
L6A7 68μ
C6E7 33-CH
TL601
TL602
TL603
BPF6A1 H3558SK -2042MYD
R6A3 22K
R6A4 22K
L6A3 15μH



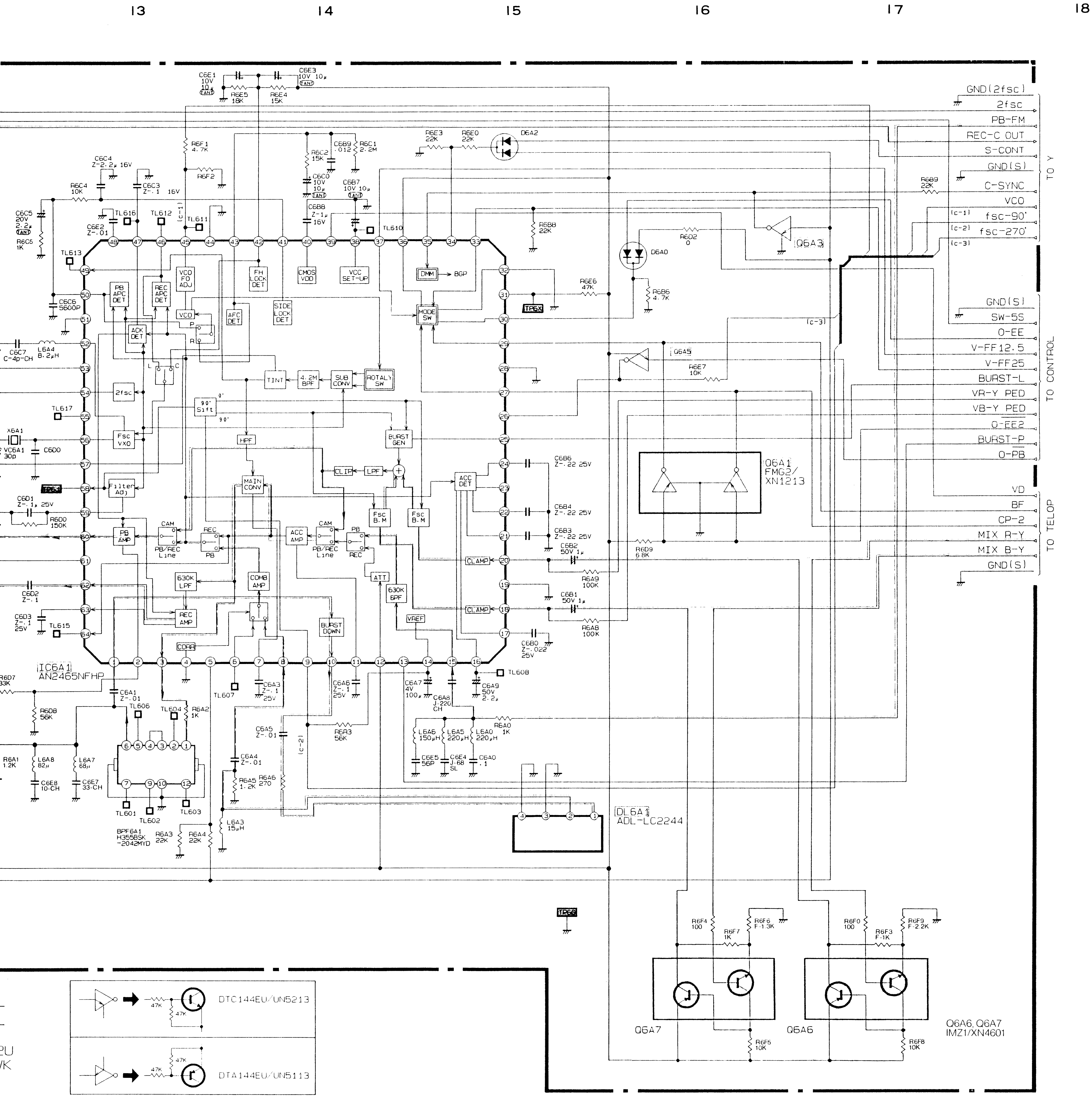
DAP202U
MA142WA



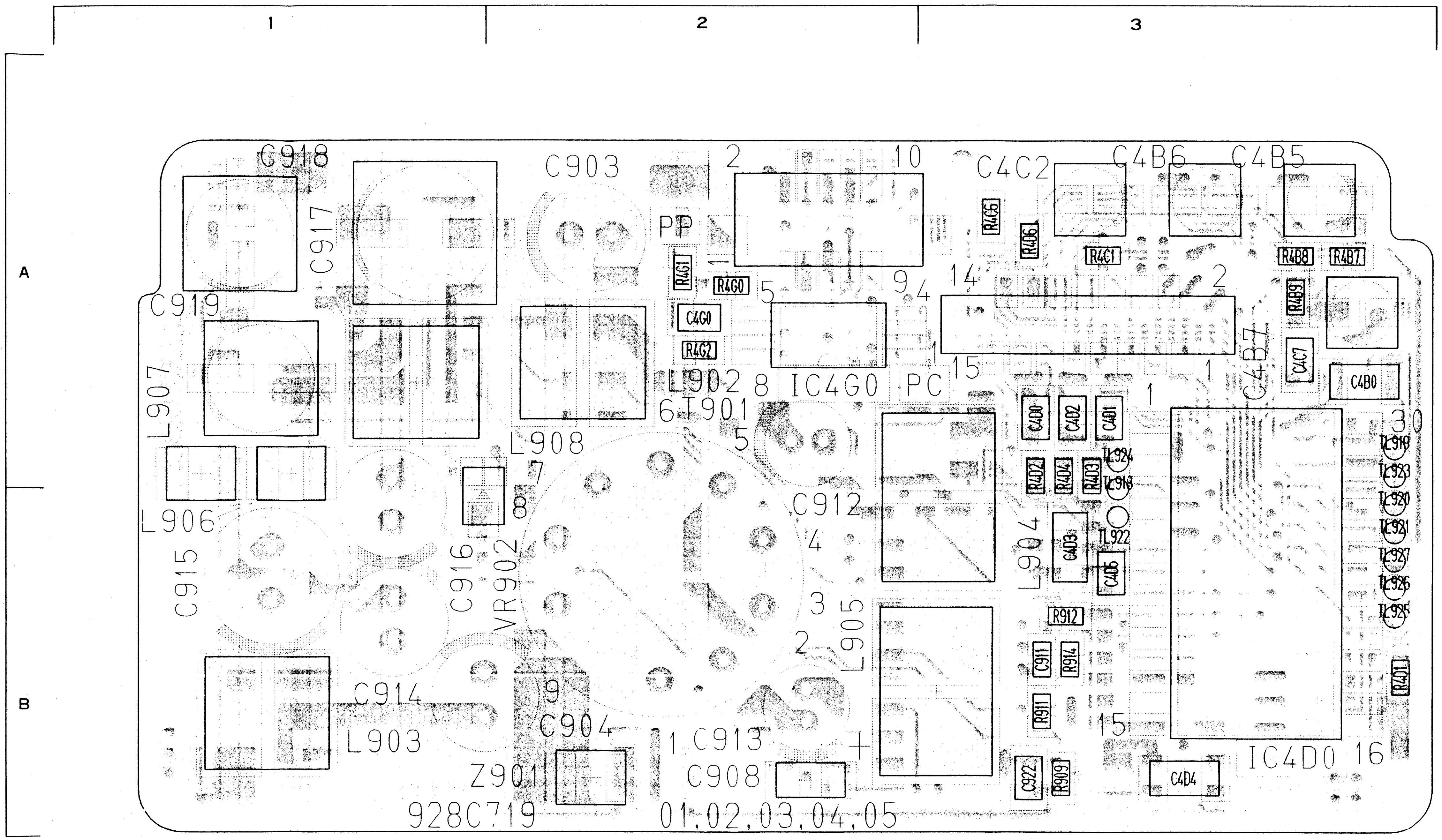
DAN202U
MA142WK



47K
47K
DTC144EU/UN5213
47K
47K
DTA144EU/UN5113


13
14
15
16
17
18
IC6A1
AN2465NFHP
DL6A1
ADL-LC2244
Q6A1
FMG2/
XN1213
Q6A3
Q6A5
Q6A6
Q6A7
Q6A6, Q6A7
IMZ1/XN4601
D6A0
D6A2
X6A1
BPF6A1
H355BSK
-2042MYD
VCO FO ADJ
FH LOCK DET
CMOS VDD
VCC SET-UP
DMM
BGP
MODE SW
PB APC DET
REC APC DET
ACK DET
AFC DET
SIDE LOCK DET
VCO
2fsc
Fsc VXO
Filter Adj
TINT
4.2M BPF
SUB CONV
ROTALY SW
90° Sift
HPF
BURST GEN
CLIP
LPF
MAIN CONV
ACC DET
Fsc B.M
PB AMP
CAM
REC
PB
PB/REC Line
ACC AMP
ATT
630K BPF
630K LPF
COMB AMP
REC AMP
CORR
BURST DOWN
VREF
CLAMP
TP6X
TP6Y
TP6Z
TL601
TL602
TL603
TL604
TL606
TL607
TL608
TL610
TL611
TL612
TL613
TL615
TL616
TL617
GND(2fsc)
2fsc
PB-FM
REC-C OUT
S-CONT
GND(S)
C-SYNC
VCO
fsc-90°
fsc-270°
TO Y
SW-5S
O-EE
V-FF12.5
V-FF25
BURST-L
VR-Y PED
VB-Y PED
O-EE2
BURST-P
O-PB
TO CONTROL
VD
BF
CP-2
MIX R-Y
MIX B-Y
TO TELOP
(c-1)
(c-2)
(c-3)
DTC144EU/UN5213
DTA144EU/UN5113
47K
2U
/K

## PCB-VTR SUB(A SIDE)

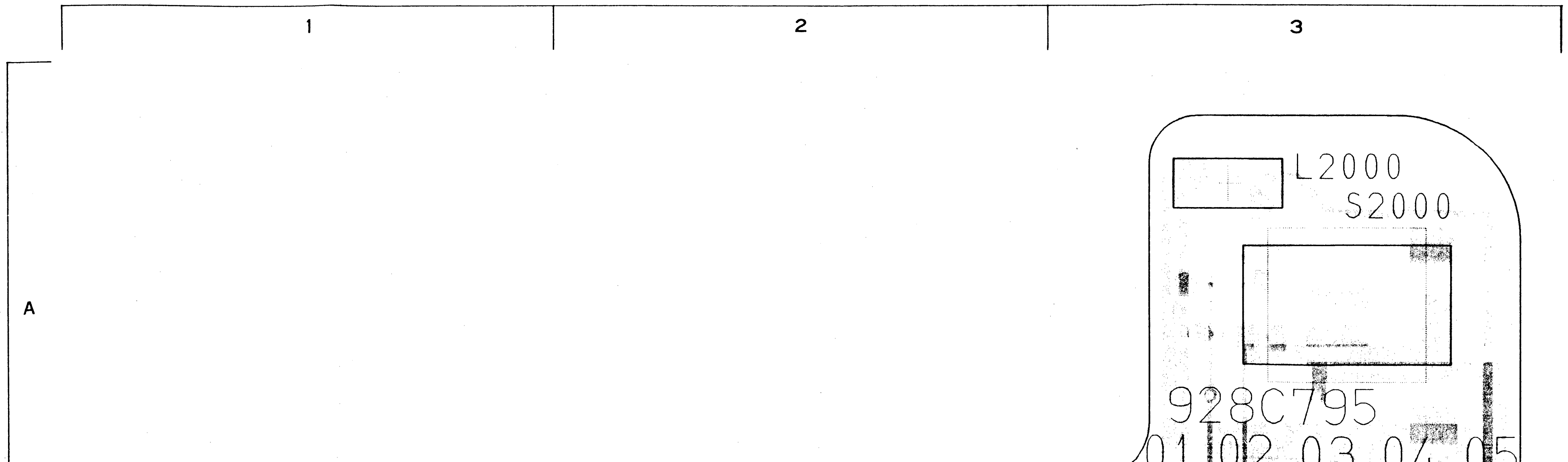

1
2
3
A
B
C918
C903
2
10
C4C2
C4B6
C4B5
C917
PP
R4G1
R4G0
5
9
4
14
2
R4C6
R4D6
R4C1
R4B8
R4B7
R4B9
C919
C4G0
R4G2
15
1
C4B7
C4C7
C4B0
L907
L902
8
IC4G0
PC
1
30
6
T901
C4D0
C4D2
C4D1
L908
5
TL919
7
R4D2
R4D4
R4D3
TL924
TL918
TL923
8
C912
TL920
L906
4
L904
C4D3
TL921
TL922
C915
C916
VR902
C4D5
TL927
TL926
3
L905
R912
TL925
2
C911
R914
R4D1
C914
9
L903
C904
R911
15
1
C913
C908
IC4D0
16
Z901
C922
R909
C4D4
928C719
01.02.03.04.05

### PCB – VTR SUB (A SIDE)

| SYMBOL NO. | ADDRESS |
|---|---|
| C4B0 | A-3 |
| C4B5 | A-3 |
| C4B6 | A-3 |
| C4B7 | A-3 |
| C4C2 | A-3 |
| C4C7 | A-3 |
| C4D0 | A-3 |
| C4D1 | A-3 |
| C4D2 | A-3 |
| C4D3 | B-3 |
| C4D4 | B-3 |
| C4D5 | B-3 |
| C4G0 | A-2 |
| C903 | A-2 |
| C904 | B-2 |
| C908 | B-2 |
| C911 | B-3 |
| C912 | B-2 |
| C913 | B-2 |
| C914 | B-1 |
| C915 | B-1 |
| C916 | B-1 |
| C917 | A-1 |
| C918 | A-1 |
| C919 | A-1 |
| C922 | B-3 |
|  |  |
| IC4D0 | B-3 |
| IC4G0 | A-2 |
|  |  |
| L902 | A-2 |
| L903 | B-1 |
| L904 | B-3 |
| L905 | B-2 |

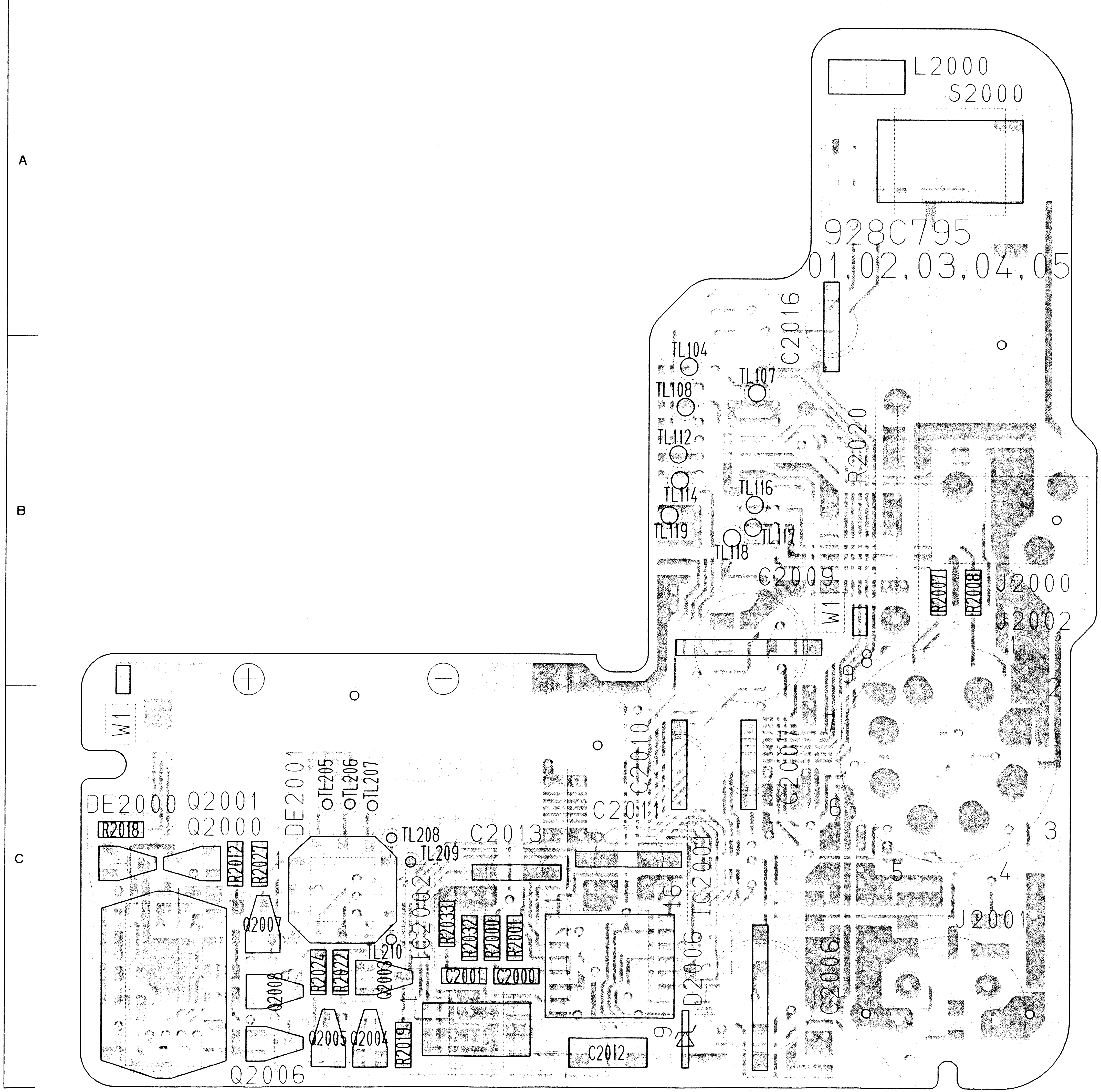
| SYMBOL NO. | ADDRESS |
|---|---|
| L906 | B-1 |
| L907 | A-1 |
| L908 | A-2 |
|  |  |
| R4B7 | A-3 |
| R4B8 | A-3 |
| R4B9 | A-3 |
| R4C1 | A-3 |
| R4C6 | A-3 |
| R4D1 | B-3 |
| R4D2 | A-3 |
| R4D3 | A-3 |
| R4D4 | A-3 |
| R4D6 | A-3 |
| R4G0 | A-2 |
| R4G1 | A-2 |
| R4G2 | A-2 |
| R909 | B-3 |
| R911 | B-3 |
| R912 | B-3 |
| R914 | B-3 |
|  |  |
| T901 | A-2 |
|  |  |
| VR902 | B-2 |
|  |  |
| Z901 | B-2 |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## PCB-REAR(A SIDE)


1
2
3
A
L2000
S2000
928C795
01.02.03.04.05

### PCB – REAR (A SIDE)

| SYMBOL NO. | ADDRESS |
|---|---|
| C2000 | C-2 |
| C2001 | C-2 |
| C2006 | C-3 |
| C2007 | C-3 |
| C2009 | B-3 |
| C2010 | C-2 |
| C2011 | C-2 |
| C2012 | C-2 |
| C2013 | C-2 |
| C2016 | A-3 |
| D2006 | C-2 |
|  |  |
| DE2000 | C-1 |
| DE2001 | C-1 |
|  |  |
| IC2001 | C-2 |
| IC2002 | C-2 |
|  |  |

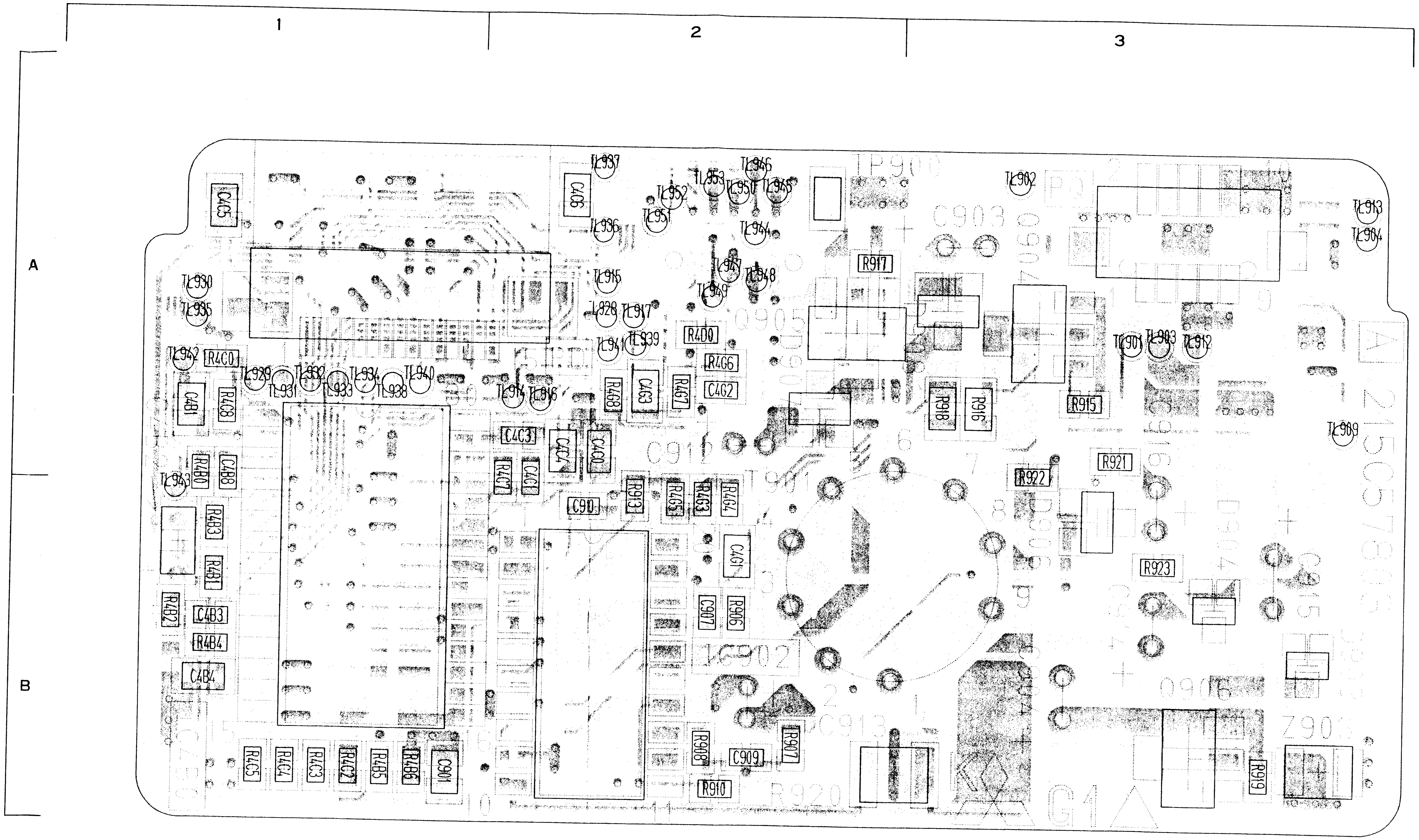

A
B
C
L2000
S2000
928C795
01,02,03,04,05
C2016
TL104
TL107
TL108
TL112
TL114
TL116
TL117
TL118
TL119
R2020
C2009
W1
R2007
R2008
J2000
J2002
W1
+
−
DE2000
Q2001
Q2000
DE2001
TL205
TL206
TL207
TL208
TL209
C2013
C2010
C2011
C2007
R2018
R2012
R2027
Q2007
Q2008
R2024
R2022
TL210
Q2003
IC2002
R2033
R2032
R2000
R2001
C2001
C2000
IC2001
D2006
C2006
J2001
C2012
Q2005
Q2004
R2019
Q2006
1
2
3
4
5
6
8
9
16

| | |
|---|---|
| C2000 | C-2 |
| C2001 | C-2 |
| C2006 | C-3 |
| C2007 | C-3 |
| C2009 | B-3 |
| C2010 | C-2 |
| C2011 | C-2 |
| C2012 | C-2 |
| C2013 | C-2 |
| C2016 | A-3 |
| D2006 | C-2 |
| | |
| DE2000 | C-1 |
| DE2001 | C-1 |
| | |
| IC2001 | C-2 |
| IC2002 | C-2 |
| | |
| L2000 | A-3 |
| | |
| Q2000 | C-1 |
| Q2001 | C-1 |
| Q2003 | C-1 |
| Q2004 | C-1 |
| Q2005 | C-1 |
| Q2006 | C-1 |
| Q2007 | C-1 |
| Q2008 | C-1 |
| | |
| R2000 | C-2 |
| R2001 | C-2 |
| R2007 | B-3 |
| R2008 | B-3 |
| R2012 | C-1 |
| R2018 | C-1 |
| R2019 | C-2 |
| R2020 | B-3 |
| R2022 | C-1 |
| R2024 | C-1 |
| R2027 | C-1 |
| R2032 | C-2 |
| R2033 | C-2 |
| | |
| S2000 | A-3 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

5 17

(5/7)

## PCB-VTR SUB(B SIDE)



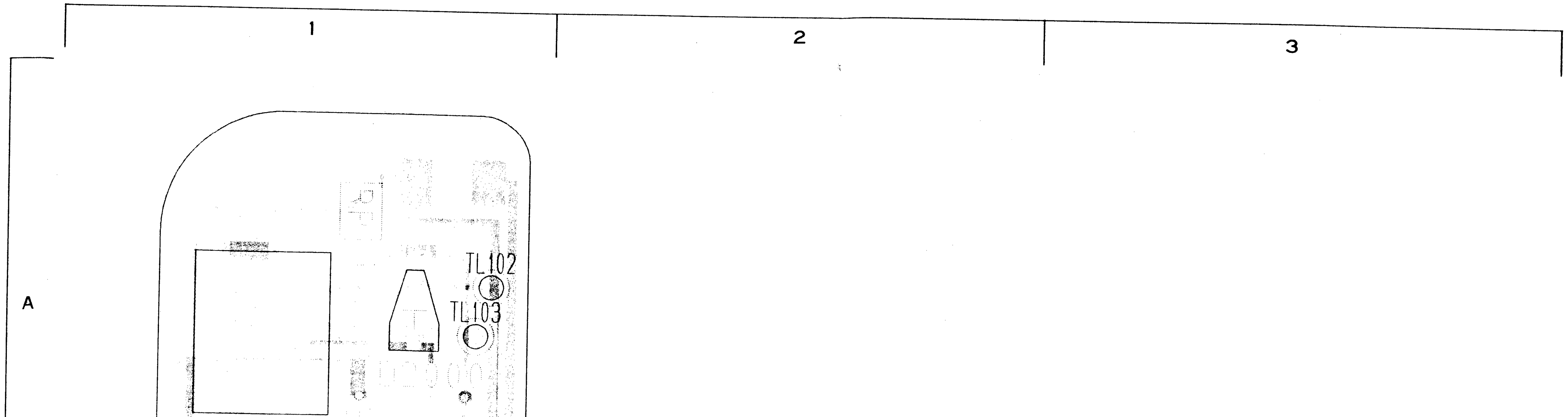
1
2
3
A
B
C4C5
C4C6
TL937
TL946
TL953
TL952
TL950
TL965
TL951
TL936
TL964
TP900
TL902
C903
TL913
TL904
TL930
TL935
TL915
TL928
TL917
TL947
TL948
TL949
R917
R4D0
R4G6
C4G2
TL941
TL939
TL942
R4C0
TL929
TL931
TL932
TL933
TL934
TL938
TL940
TL914
TL916
R4B8
C4C3
R4G7
C4B1
R4C8
R918
R916
R915
TL901
TL903
TL912
TL909
C4C3
C4C4
C4C0
R4B0
C4B8
TL963
R4C7
C4C1
R913
R4G5
R4G3
R4G4
R921
R922
C910
R4B3
R4B1
R923
C4G1
R4B2
C4B3
C907
R906
R4B4
C4B4
IC902
R4C5
R4C4
R4C3
R4C2
R4B5
R4B6
C901
R908
C909
R907
R910
R919

## PCB – VTR SUB (B SIDE)

| SYMBOL NO. | ADDRESS |
|---|---|
| C4B1 | A-1 |
| C4B2 | A-1 |
| C4B3 | B-1 |
| C4B4 | B-1 |
| C4B8 | A-1 |
| C4C0 | A-2 |
| C4C1 | A-2 |
| C4C3 | A-2 |
| C4C4 | A-2 |
| C4C5 | A-1 |
| C4C6 | A-2 |
| C4G1 | B-2 |
| C4G2 | A-2 |
| C4G3 | A-2 |
| C901 | B-1 |
| C903 | A-3 |
| C904 | B-3 |
| C907 | B-2 |
| C909 | B-2 |
| C910 | B-2 |
| C912 | A-2 |
| C913 | B-2 |
| C914 | B-3 |
| C915 | B-3 |
| C916 | A-3 |
| | |
| D903 | B-3 |
| D904 | B-3 |
| D906 | B-3 |
| D907 | A-2 |
| D908 | A-3 |
| | |
| IC4B0 | B-1 |
| IC902 | B-2 |
| | |
| Q904 | A-3 |
| Q905 | A-2 |
| Q906 | B-3 |
| | |
| R4B0 | A-1 |
| R4B1 | B-1 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R4B2 | B-1 |
| R4B3 | B-1 |
| R4B4 | B-1 |
| R4B5 | B-1 |
| R4B6 | B-1 |
| R4C0 | A-1 |
| R4C2 | B-1 |
| R4C3 | B-1 |
| R4C4 | B-1 |
| R4C5 | B-1 |
| R4C7 | A-2 |
| R4C8 | A-1 |
| R4D0 | A-2 |
| R4G3 | B-2 |
| R4G4 | B-2 |
| R4G5 | B-2 |
| R4G6 | A-2 |
| R4G7 | A-2 |
| R4G8 | A-2 |
| R906 | B-2 |
| R907 | B-2 |
| R908 | B-2 |
| R910 | B-2 |
| R913 | B-2 |
| R915 | A-3 |
| R916 | A-3 |
| R917 | A-2 |
| R918 | A-3 |
| R919 | B-3 |
| R920 | B-2 |
| R921 | A-3 |
| R922 | A-3 |
| R923 | B-3 |
| | |
| T901 | A-2 |
| | |
| TP900 | A-2 |
| | |
| Z903 | B-3 |
| | |
| | |

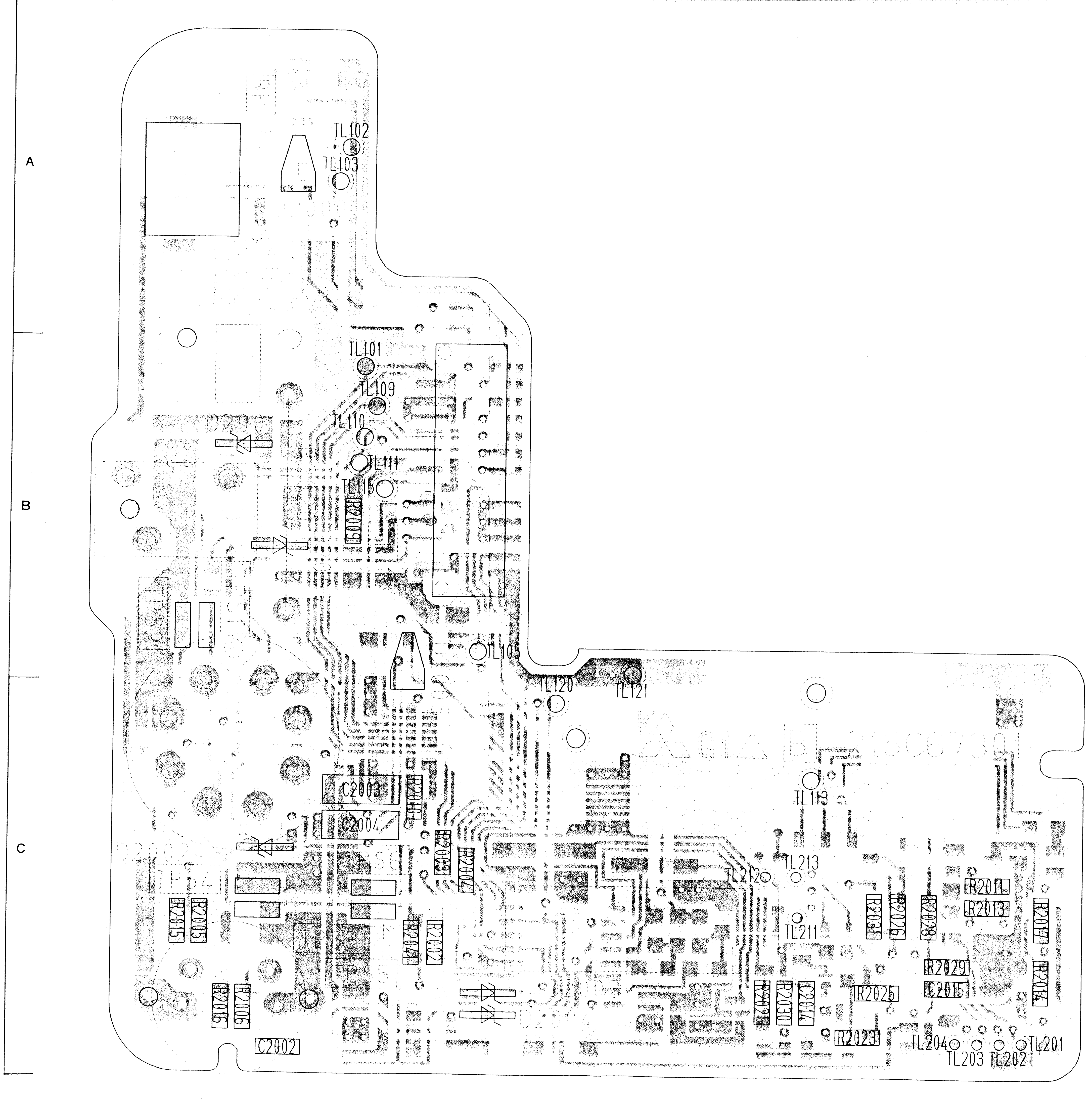
## PCB-REAR(B SIDE)



1
2
3
A
TL102
TL103

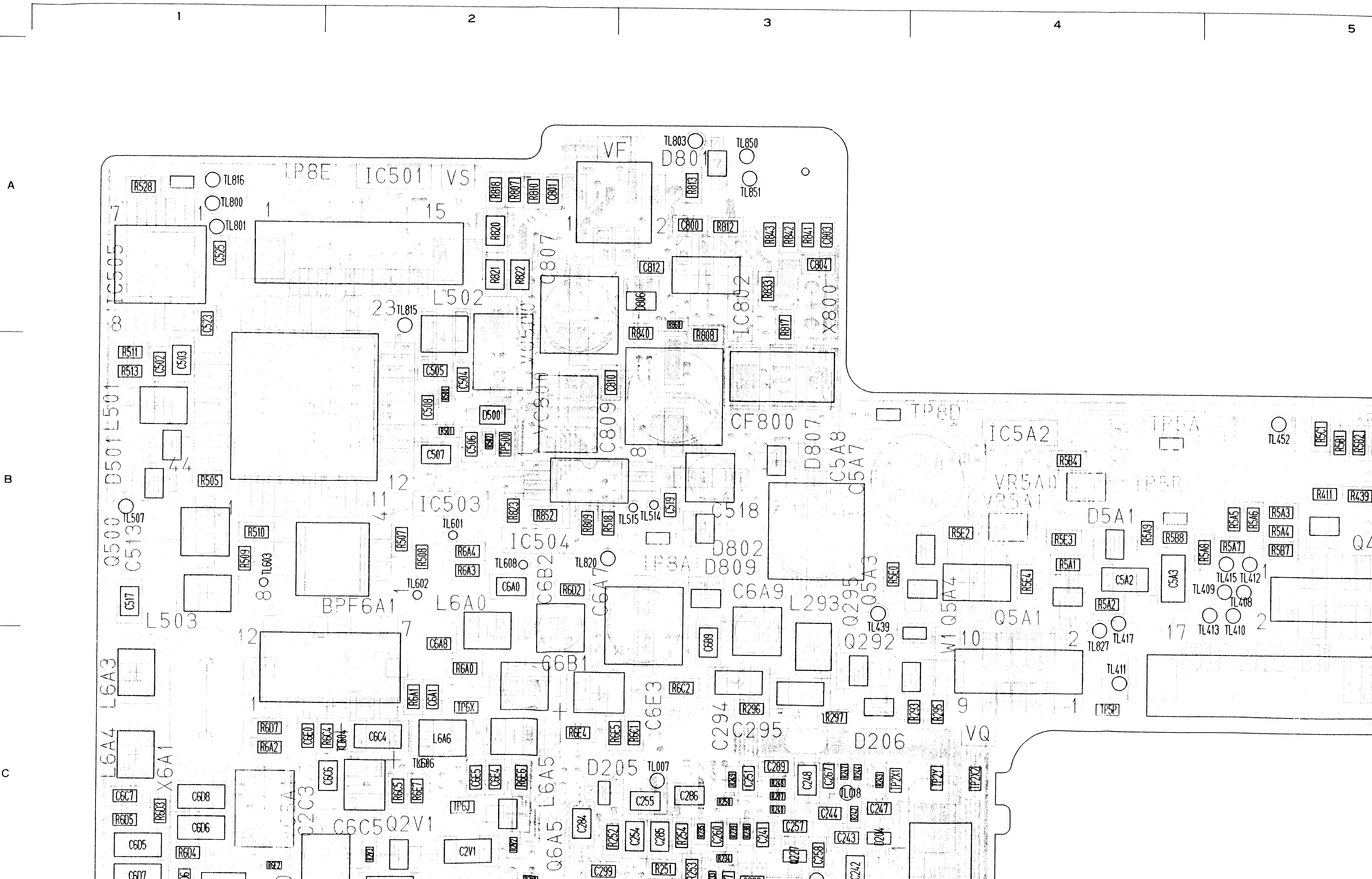
## PCB – REAR (B SIDE)

| SYMBOL NO. | ADDRESS |
|---|---|
| C2002 | C-1 |
| C2003 | C-1 |
| C2004 | C-1 |
| C2014 | C-3 |
| C2015 | C-3 |
| | |
| D2000 | A-1 |
| D2001 | A-1 |
| D2002 | C-1 |
| D2003 | C-2 |
| D2004 | C-2 |
| D2005 | B-2 |
| D2007 | B-1 |
| | |
| R2002 | C-2 |

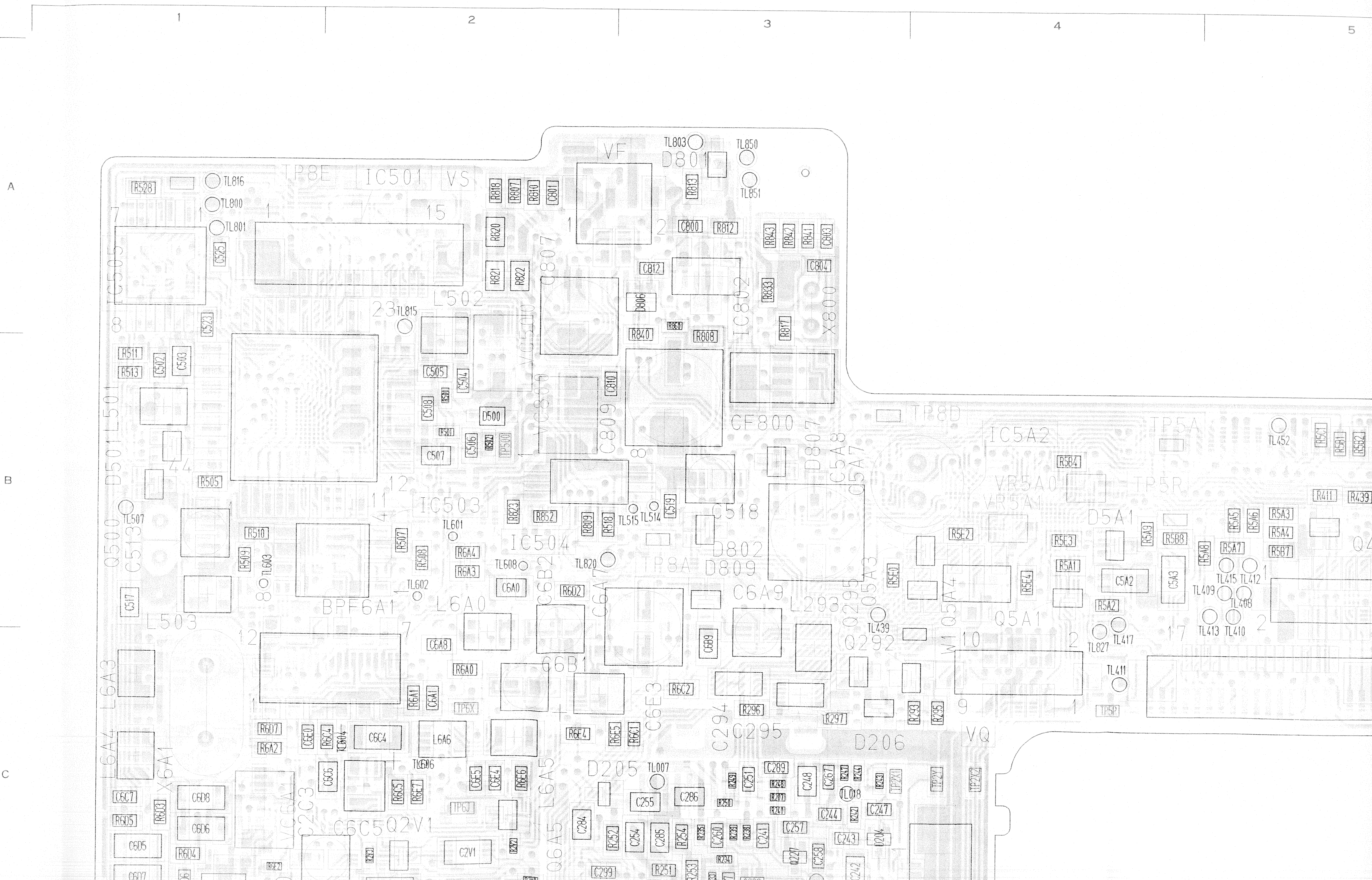

A
B
C
TL102
TL103
TL101
TL109
TL110
TL111
TL115
R2009
D2001
TPS2
TL105
TL120
TL121
G1
B
215C67301
TL113
C2003
C2004
R2040
R2003
R2004
D2002
TPS4
R2015
R2005
R2041
R2002
R2016
R2006
C2002
D2004
TL212
TL213
TL211
R2031
R2026
R2028
R2011
R2013
R2017
R2029
C2015
R2014
R2021
R2030
C2014
R2025
R2023
TL204
TL203
TL202
TL201

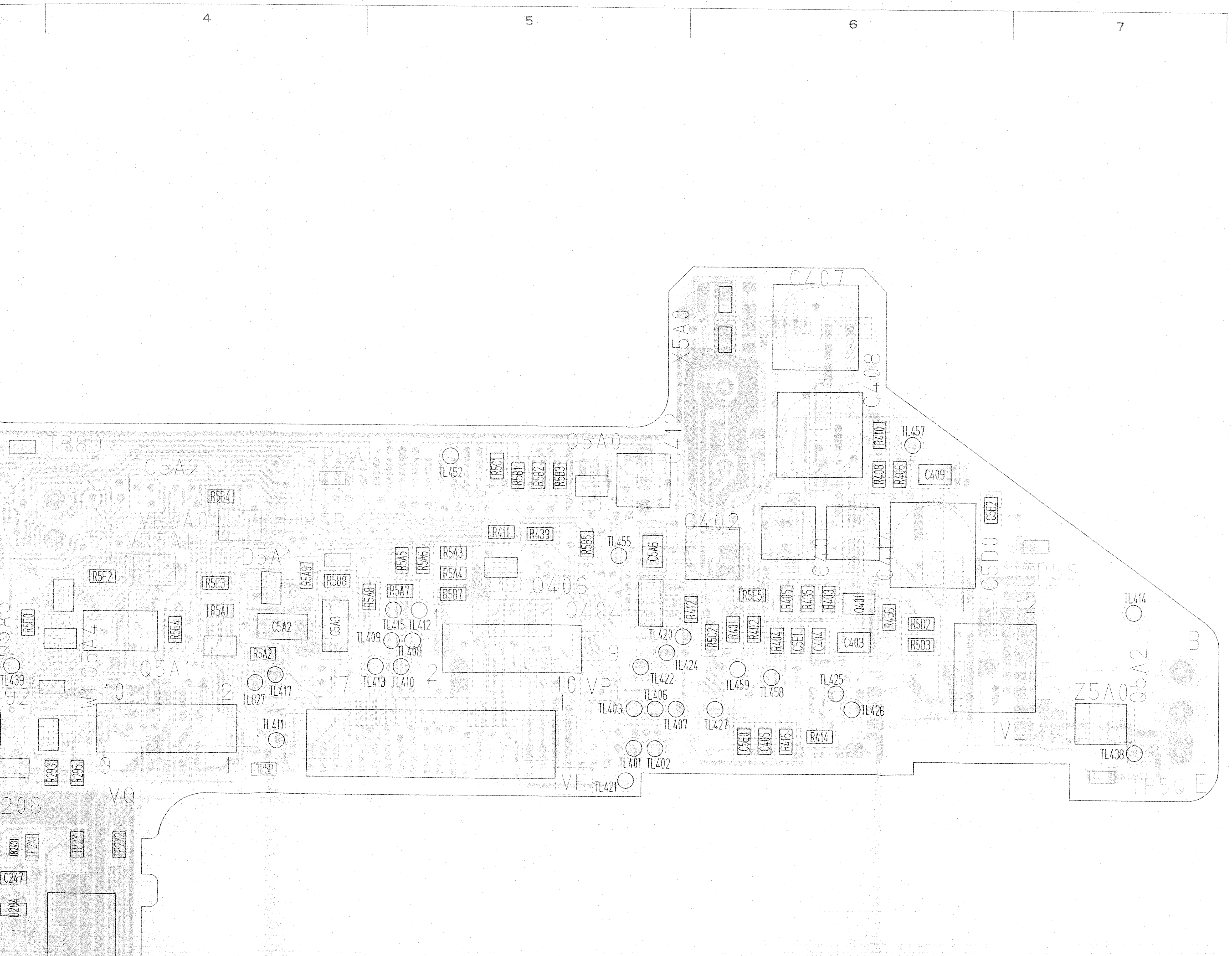
| NO. | |
|---|---|
| C2002 | C-1 |
| C2003 | C-1 |
| C2004 | C-1 |
| C2014 | C-3 |
| C2015 | C-3 |
| | |
| D2000 | A-1 |
| D2001 | A-1 |
| D2002 | C-1 |
| D2003 | C-2 |
| D2004 | C-2 |
| D2005 | B-2 |
| D2007 | B-1 |
| | |
| R2002 | C-2 |
| R2003 | C-2 |
| R2004 | C-2 |
| R2005 | C-1 |
| R2006 | C-1 |
| R2009 | B-1 |
| R2010 | C-2 |
| R2011 | C-3 |
| R2013 | C-3 |
| R2014 | C-3 |
| R2015 | C-1 |
| R2016 | C-1 |
| R2017 | C-3 |
| R2020 | B-1 |
| R2021 | C-3 |
| R2023 | C-3 |
| R2025 | C-3 |
| R2026 | C-3 |
| R2028 | C-3 |
| R2029 | C-3 |
| R2030 | C-3 |
| R2031 | C-3 |
| R2041 | C-2 |
| | |
| TPS1 | B-1 |
| TPS2 | B-1 |
| TPS3 | C-1 |
| TPS4 | C-1 |
| TPS5 | C-1 |
| TPS6 | C-1 |

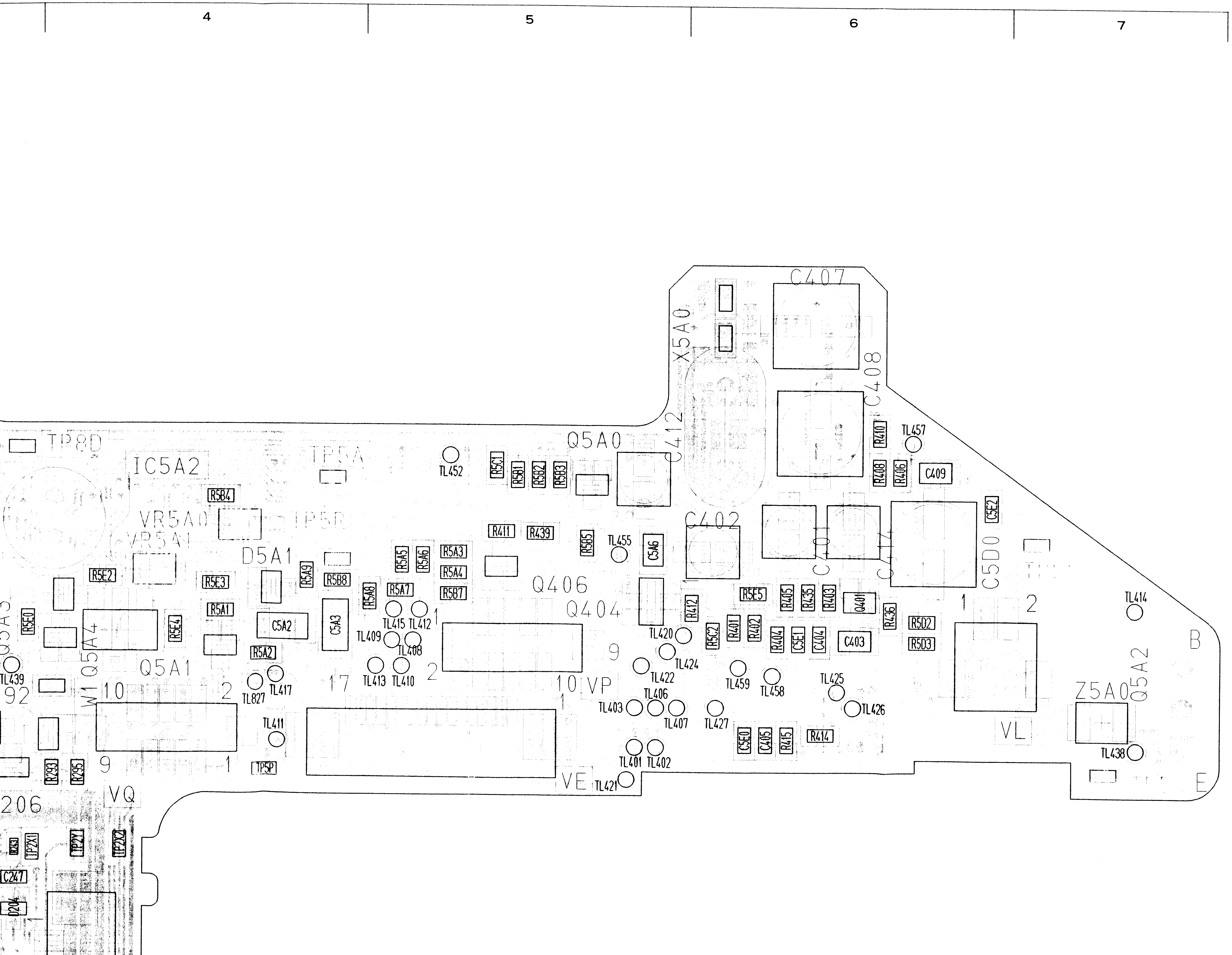
PCB-VTR(A SIDE)

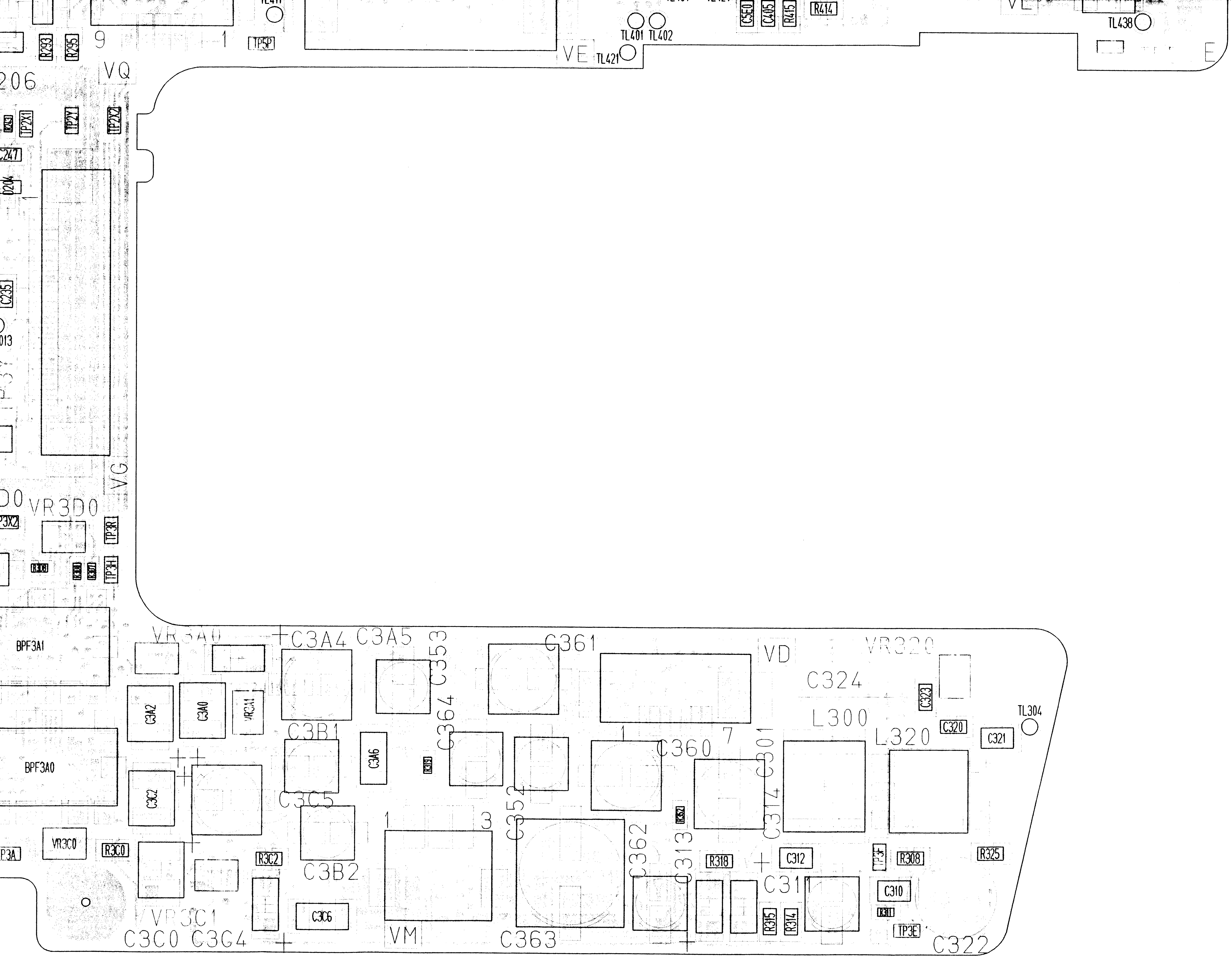

1
2
3
4
5
A
B
C
R528
TL816
TL800
TL801
IP8E
IC501
VS
VF
TL803
D801
TL850
TL851
R818
R807
R810
C801
R813
IC505
C525
C800
R812
R843
R842
R841
C803
R820
C807
C812
C804
R821
R822
L502
23
TL815
IC802
R833
X800
D806
R817
C523
R511
R513
C502
C503
R850
R840
R808
C505
C504
L501
R501
VC800
C810
D500
C508
C506
R502
TP500
C809
CF800
D501
C507
R505
TP8D
D807
C5A8
C5A7
IC5A2
TP5A
TL452
R5C1
R5B1
R5B2
R5B4
VR5A0
VR5A1
IP5R
12
11
IC503
R823
R852
R809
R518
TL515
TL514
C519
C518
D5A1
R411
R439
TL507
Q500
C513
R510
TL601
IC504
R507
R508
D802
R5E2
R5E3
R5A9
R5B8
R5A5
R5A6
R5A3
R5A4
R5B7
R5A8
R5A7
R509
TL603
R6A4
R6A3
TL608
C6B2
TL820
IP8A
D809
Q5A3
R5E0
R5A1
C5A2
C5A3
TL415
TL412
TL409
TL408
C517
TL602
C6A0
R6D2
C6A7
C6A9
L293
Q295
Q5A4
R5E4
R5A2
L503
BPF6A1
L6A0
TL439
Q5A1
TL827
TL417
TL413
TL410
17
12
C6A8
Q292
W1
10
2
C6B9
L6A3
R6A0
C6B1
C6E3
R6C2
TL411
R6A1
C6A1
TP6X
C294
R296
R297
R293
R295
9
TP5P
L6A4
R6D7
C6E0
R6C4
TL604
C6C4
L6A6
R6E4
R6E5
R6C1
C295
D206
VQ
R6A2
X6A1
C6G6
TL606
C6E5
C6E4
R6E6
L6A5
D205
TL007
C289
C248
C267
TP2X1
TP2Y1
TP2X2
C6C7
C6D8
C6A1
C2C3
R6C5
R6E7
TP6J
C255
C286
C251
TL018
R6D5
R603
C6D6
C6C5
Q2V1
Q6A5
C284
R252
C254
C285
R254
C260
C241
C257
C244
C247
C243
D204
C6D5
R6D4
C2V1
R251
R253
C258
C242
C6D7
R6E2
C299

PCB-VTR(A SIDE)

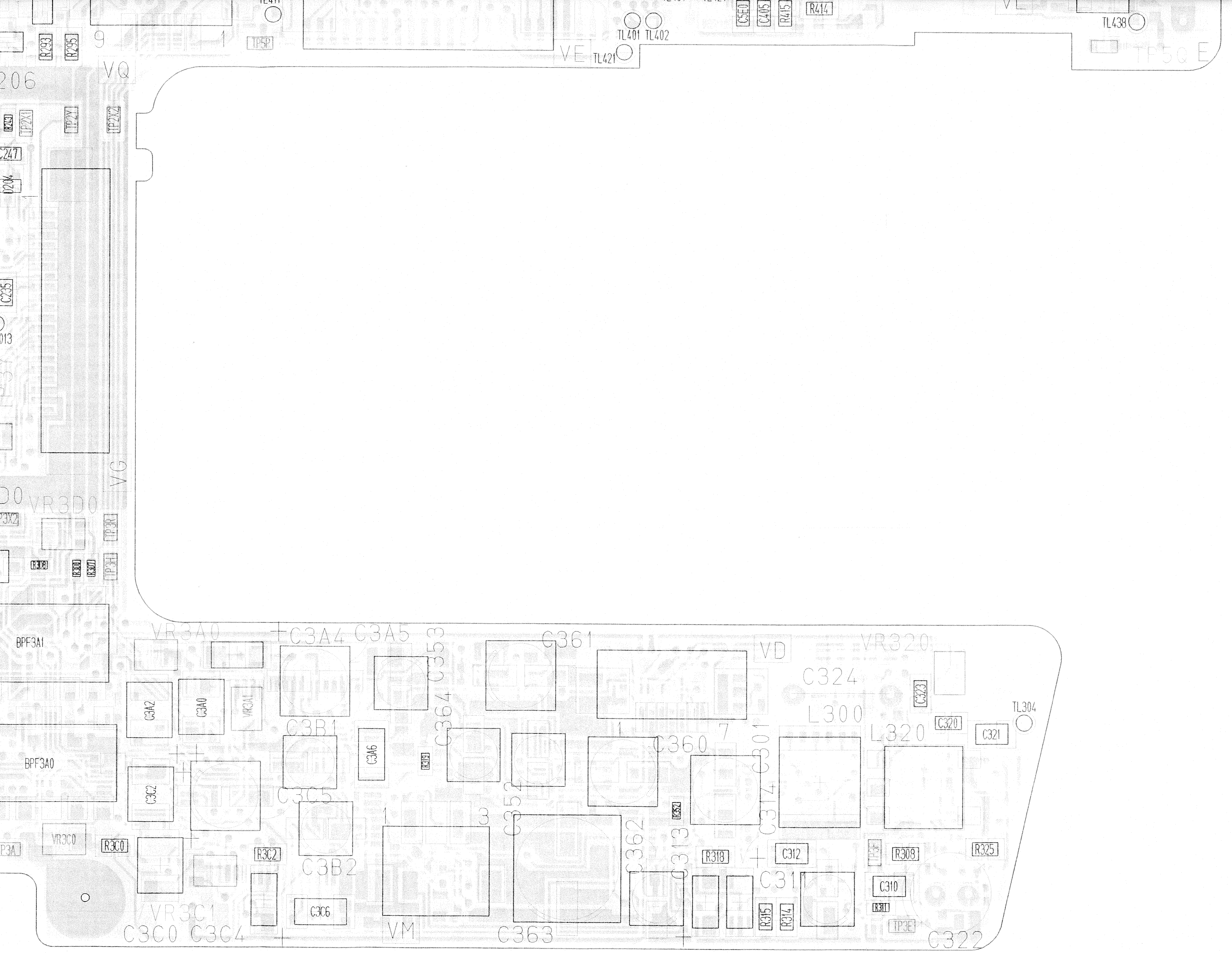

1
2
3
4
5
A
B
C
R528
TL816
TL800
TL801
TP8E
IC501
VS
15
1
7
IC505
C525
C523
8
23
TL815
L502
VF
TL803
D801
TL850
TL851
R818
R807
R810
C801
R813
C800
R812
2
R820
R821
R822
Q807
C812
IC802
R843
R842
R841
C803
C804
R833
X800
D806
R840
R860
R808
R817
R511
R513
C502
C503
C505
C504
VC800
D501
L501
C508
R501
R503
D500
C506
R502
TP500
C507
C810
C809
CF800
44
R505
12
11
4
IC503
TL507
Q500
C513
R510
R509
TL603
R507
R508
TL601
R6A4
R6A3
TL608
TL602
R823
R852
IC504
R809
R518
TL515
TL514
C519
C518
TL820
TP8A
D802
D809
C5A8
C5A7
D807
Q5A3
TP8D
IC5A2
TP5A
TL452
R5C1
R5B1
R5B2
R5B4
VR5A0
VR5A1
TP5R
R411
R439
D5A1
R5A3
R5A4
R5B7
R5A5
R5A6
R5A9
R5B8
R5A8
R5A7
R5E2
R5E3
R5A1
R5E0
R5E4
C5A2
C5A3
TL415
TL412
TL409
TL408
TL413
TL410
TL417
TL827
TL411
R5A2
Q5A1
Q5A4
W1
10
17
9
TP5P
VQ
C517
L503
BPF6A1
L6A0
C6A0
R6D2
C6B2
C6A
C6A9
L293
Q295
TL439
Q292
C6A8
R6A0
C6B1
C6B9
R6A1
C6A1
TP6X
R6C2
C6E3
C294
C295
R296
R297
R293
R295
D206
L6A3
L6A4
X6A1
R6D7
R6A2
C6E0
R6C4
TL604
C6C4
L6A6
TL606
R6E4
R6E5
R6C1
L6A5
D205
TL007
C6C7
R6D5
C6D8
C6D6
C6D5
R603
R6D4
C6D7
VC6A1
C2C3
C6C6
R6C5
R6E7
C6C5
Q2V1
TP6J
C6E5
C6E4
R6E6
Q6A5
C2V1
C284
R252
C254
C285
R254
C255
C286
C289
C251
C248
C267
TL018
C244
C247
C257
C243
D204
Q227
C258
C260
C241
C299
R251
R253
TP2X1
TP2Y
TP2X2

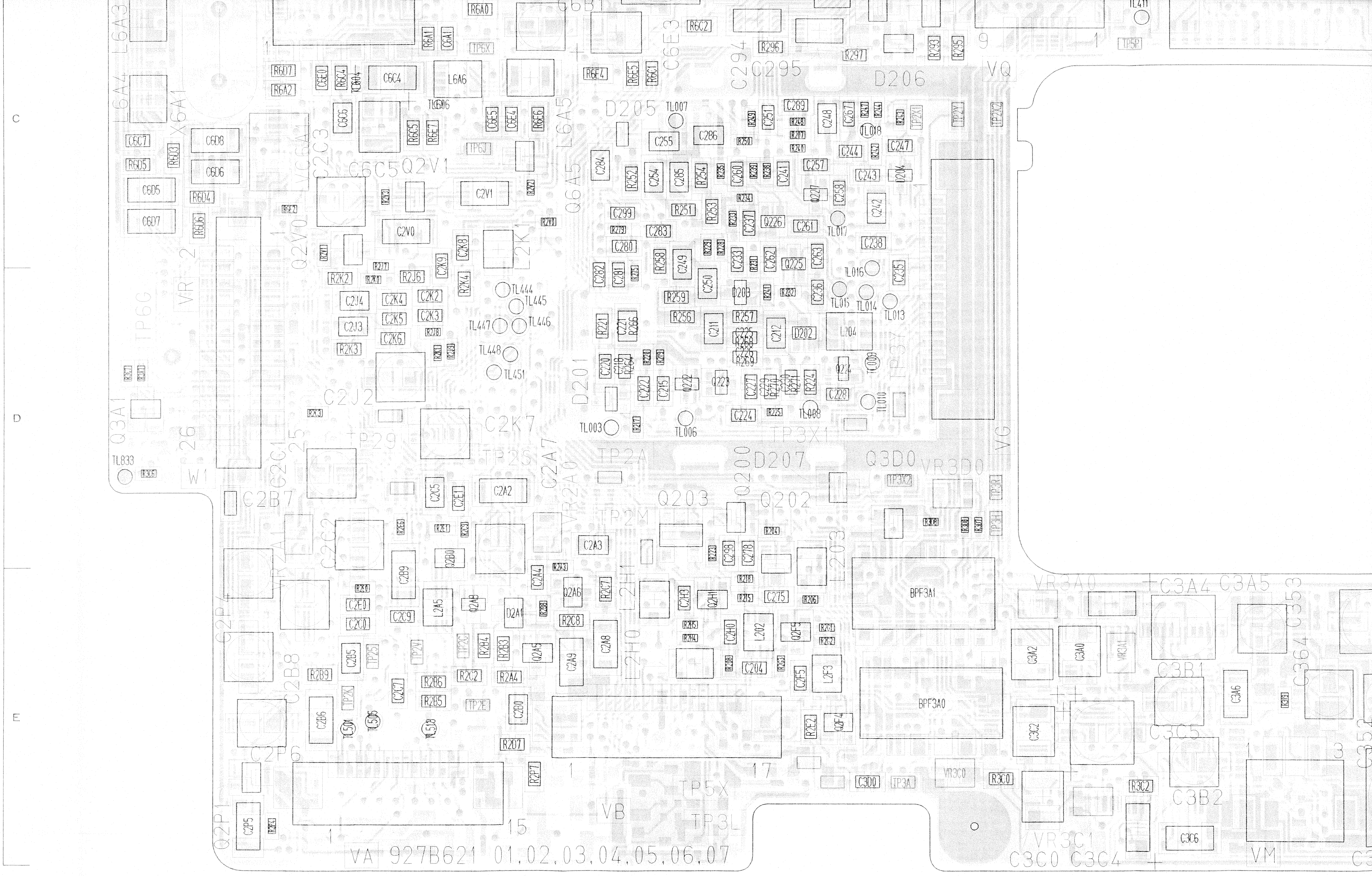

4
5
6
7
C407
X5A0
C408
C412
Q5A0
TP8D
IC5A2
TP5A
TL452
R5C1
R5B1
R5B2
R5B3
R410
TL457
R408
R406
C409
R5B4
VR5A0
VR5A1
TP5R
C402
C5E2
R411
R439
R5B5
TL455
C5A6
C401
C411
C5D0
TP5S
D5A1
R5A5
R5A6
R5A3
R5A4
R5B7
R5E2
R5E3
R5A9
R5B8
R5A8
R5A7
Q406
Q404
R412
R5E5
R405
R435
R403
Q401
R436
R5D2
R5D3
TL414
R5E0
Q5A4
R5E4
R5A1
C5A2
C5A3
TL415
TL412
TL409
TL408
TL420
R5C2
R401
R402
R404
C5E1
C404
C403
B
Q5A3
TL439
Q5A1
R5A2
TL413
TL410
TL424
TL422
TL459
TL458
TL425
Q5A2
92
W1
10
2
TL827
TL417
17
9
10
VP
TL406
TL403
TL407
TL427
TL426
Z5A0
1
TL411
TL401
TL402
C5E0
C405
R415
R414
VL
TL438
R293
R295
TP5P
VE
TL421
TP5Q
E
206
VQ
R243
TP2X1
TP2Y
TP2X2
C247
D204

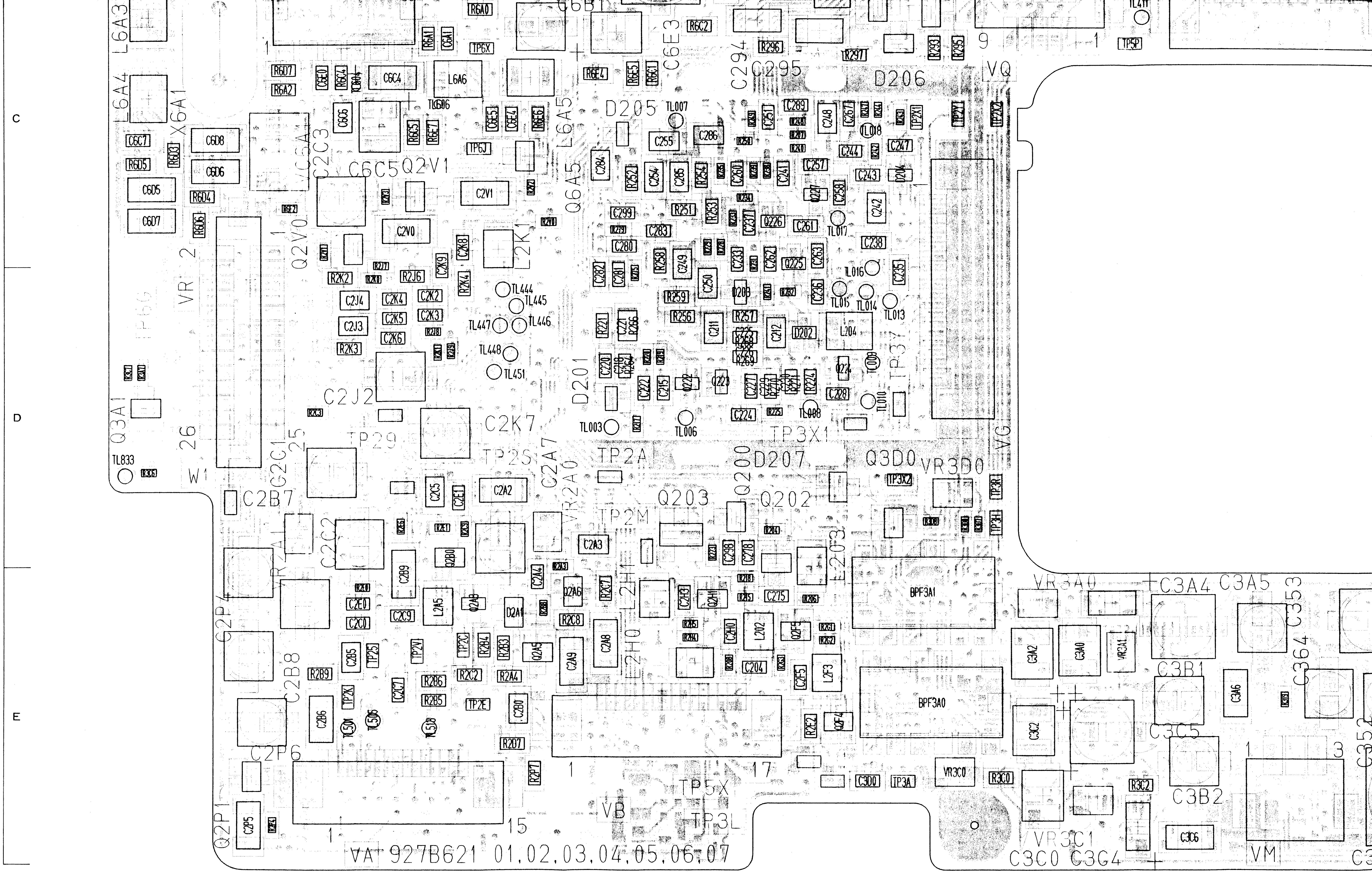

4
5
6
7
C407
X5A0
C408
C412
Q5A0
R410
TL457
R408
R406
C409
TP8D
IC5A2
TP5A
TL452
R5C1
R5B1
R5B2
R5B3
R5B4
VR5A0
TP5R
VR5A1
D5A1
R411
R439
R5B5
TL455
C5A6
C402
C401
C411
C5D0
C5E2
R5A5
R5A6
R5A3
R5A4
R5B7
R5A9
R5B8
R5E2
R5E3
R5A8
R5A7
Q406
Q404
R412
R5E5
R405
R435
R403
Q401
R436
R5D2
R5D3
R5E0
R5E4
Q5A4
Q5A1
R5A1
C5A2
C5A3
TL415
TL412
TL409
TL408
TL420
R5C2
R401
R402
R404
C5E1
C404
C403
TL414
B
TL439
W1
R5A2
TL827
TL417
TL413
TL410
TL424
TL422
TL459
TL458
TL425
TL426
Z5A0
Q5A2
TL406
TL403
TL407
TL427
TL411
TL401
TL402
C5E0
C405
R415
R414
VL
TL438
TP5P
R293
R295
VQ
VE
TL421
E
VP
206
92
TP2X1
TP2Y1
TP2X2
C247
D204
1
2
9
10
17



R293
R295
9
1
TP5P
TL401
TL402
VE
TL421
C5E0
C405
R415
R414
TL438
E
VQ
206
TP2X1
TP2Y
TP2X2
C247
D204
1
C235
013
VG
D0
VR3D0
TP3X2
TP3R
R308
TP3H
BPF3A1
VR3A0
C3A4
C3A5
C353
C361
VD
VR320
C324
C323
TL304
C3A2
C3A0
VRC A1
C364
L300
C320
C321
L320
BPF3A0
C3B1
C3A6
C360
7
1
C301
C3C2
C3C5
C352
C314
3
1
C362
C313
VR3C0
R3C0
R3C2
C3B2
R318
C312
R308
R325
TP3A
C311
C310
VR3C1
C3C6
R315
R314
TP3E
C3C0
C3G4
VM
C363
C322


TL401
TL402
TL421
TL438
C5E0
C405
R415
R414
VE
VL
TP5Q
E
R293
R295
9
1
TP5P
VQ
206
TP2X1
TP2Y
TP2X2
C247
D204
C235
013
VG
VR3D0
TP3R
TP3H
R308
R306
R307
BPF3A1
BPF3A0
VR3A0
C3A4
C3A5
C353
C361
VD
VR320
C324
C323
TL304
C320
C321
L300
L320
C3A2
C3A0
VR3A1
C3B1
C3A6
R319
C364
C360
7
C301
C314
C3C2
C3C5
C352
R352
C362
C313
R318
C312
TP3F
R308
R325
VR3C0
R3C0
TP3A
R3C2
C3B2
3
C3C6
VM
C363
C311
R315
R314
C310
R311
TP3E
C322
VR3C1
C3C0
C3C4


C
D
E
L6A3
L6A4
X6A1
R6A0
R6A1
C6A1
TP6X
G6B1
C6E3
R6C2
R296
R297
C294
C295
D206
R293
R295
VQ
TL411
TP5P
R6D7
R6A2
C6E0
R6C4
C6C4
L6A6
TL6D6
R6E4
R6E5
R6C1
C6C6
R6C5
R6E7
C6E5
C6E4
R6E6
L6A5
D205
TL007
C289
C248
C267
C251
C255
C286
C247
C244
TL018
TP2X1
TP2Y
TP2X2
C6C7
R6D3
C6D8
C6D6
VC6A1
C2C3
C6C5
Q2V1
TP6J
C6D5
R6D5
R6D4
C2V1
Q6A5
C284
R252
C254
C285
R254
C260
C241
C257
C243
D204
C6D7
R6D6
R6E2
Q2V0
C2V0
R2V0
C2K1
C299
R251
R253
C237
Q226
C261
Q227
C258
C242
TL017
C283
C280
C238
VR
TP6G
C2K8
C2K9
R2J7
R2K2
R2J6
R2K4
TL444
TL445
TL446
TL447
TL448
TL451
C2J4
C2K4
C2K2
C2J3
C2K5
C2K3
C2K6
R2K3
C282
C281
R258
C249
C250
C233
C262
Q225
C263
TL016
C235
R259
D203
C236
TL015
TL014
TL013
R221
C221
R266
R256
C211
R257
C212
D202
L204
C220
C222
C215
Q222
Q223
C227
R224
Q224
TL009
C228
TL010
C224
TL008
TL003
TL006
D201
C2J2
C2K7
TP29
Q3A1
26
25
W1
TL833
C2G1
TP2S
C2A7
VR2A0
TP2A
Q200
D207
TP3X1
Q3D0
VR3D0
TP3X2
VG
TP3R
C2B7
C2C5
C2E1
C2A2
Q203
TP2M
Q202
TP3H
R2E1
C2B0
C2A3
C298
C278
L203
BPF3A1
VR3A0
C3A4
C3A5
C353
VR2A1
C2C2
C2B9
C2A4
Q2A6
R2C7
L2H1
C2H3
Q2H1
C275
C2E0
C2C0
C2C9
L2A5
Q2A8
D2A1
R2C8
C2A8
L2H0
C2H0
L202
Q2F5
C3A2
C3A0
VR3A1
C3B1
C364
C2P4
C2B8
R2B9
C2B5
TP25
TP2V
TP2C
R2B4
R2B3
Q2A5
C2A9
C204
C2F5
L2F3
BPF3A0
C3A6
C3C2
C3C5
C3B2
R2B6
R2B5
R2C2
R2A4
C2C7
TP2K
TP2E
C2B6
TL501
TL505
TL513
C2B0
R2E2
Q2F4
R207
R2P7
C2P6
1
17
15
TP5X
TP3L
VB
C3D0
TP3A
VR3C0
R3C0
R3C2
C3C6
VR3C1
C3C0
C3C4
VM
Q2P1
C2P5
VA 927B621 01.02.03.04.05.06.07


C
D
E
L6A3
L6A4
X6A1
VC6A1
C6C5
Q2V1
C2C3
Q2V0
VR 2
Q3A1
TL833
26
W1
25
G2C1
C2B7
C2J2
TP29
C2K7
TP2S
C2A7
VR2A0
TP2A
TP2M
Q203
Q200
D207
Q202
TP3X1
Q3D0
VR3D0
VG
D201
Q6A5
L6A5
D205
TL007
C6E3
C294
C295
D206
VQ
TL444
TL445
TL446
TL447
TL448
TL451
TL003
TL006
TL008
TL010
TL013
TL014
TL015
TL016
TL017
TL018
TP37
L204
D202
C2C2
VR2A1
C2P4
C2B8
C2P6
Q2P1
L2H1
L2H0
L203
BPF3A1
BPF3A0
VR3A0
C3A4
C3A5
C353
C364
C3B1
C3C5
C3B2
VR3C1
C3C0
C3G4
VM
VR3C0
TP5X
TP3L
VB
17
15
1
3
9
VA 927B621 01,02,03,04,05,06,07

## PCB – VTR (A SIDE)

| SYMBOL NO. | ADDRESS |
|---|---|
| BPF3A0 | E-4 |
| BPF3A1 | E-3 |
| BPF6A1 | B-2 |
| | |
| C204 | E-3 |
| C211 | D-3 |
| C212 | D-3 |
| C215 | D-3 |
| C218 | D-2 |
| C220 | D-2 |
| C221 | D-2 |
| C222 | D-3 |
| C224 | D-3 |
| C225 | D-3 |
| C226 | D-3 |
| C227 | D-3 |
| C228 | D-3 |
| C229 | D-3 |
| C230 | D-3 |
| C233 | C-3 |
| C235 | D-3 |
| C236 | D-3 |
| C237 | C-3 |
| C238 | C-3 |
| C241 | C-3 |
| C242 | C-3 |
| C243 | C-3 |
| C244 | C-3 |
| C247 | C-3 |
| C248 | C-3 |
| C249 | C-3 |
| C250 | D-3 |
| C251 | C-3 |
| C254 | C-3 |
| C255 | C-3 |
| C257 | C-3 |
| C258 | C-3 |
| C260 | C-3 |
| C261 | C-3 |
| C262 | C-3 |
| C263 | C-3 |
| C267 | C-3 |
| C275 | E-3 |
| C278 | D-3 |
| C280 | C-2 |
| C281 | D-2 |
| C282 | D-2 |
| C283 | C-3 |
| C284 | C-2 |
| C285 | C-3 |
| C286 | C-3 |
| C289 | C-3 |
| C294 | C-3 |
| C295 | C-3 |
| C298 | D-3 |
| C299 | C-2 |
| C2A2 | D-2 |
| C2A3 | D-2 |
| C2A4 | E-2 |
| C2A7 | D-2 |

| SYMBOL NO. | ADDRESS |
|---|---|
| C2A8 | E-2 |
| C2A9 | E-2 |
| C2B0 | E-2 |
| C2B5 | E-2 |
| C2B6 | E-1 |
| C2B7 | D-1 |
| C2B8 | E-1 |
| C2B9 | E-2 |
| C2C0 | E-2 |
| C2C1 | D-1 |
| C2C2 | D-1 |
| C2C3 | C-1 |
| C2C5 | D-2 |
| C2C7 | E-2 |
| C2C9 | E-2 |
| C2E0 | E-2 |
| C2E1 | D-2 |
| C2F5 | E-3 |
| C2H0 | E-3 |
| C2H3 | E-3 |
| C2J2 | D-2 |
| C2J3 | D-2 |
| C2J4 | D-2 |
| C2K2 | D-2 |
| C2K3 | D-2 |
| C2K4 | D-2 |
| C2K5 | D-2 |
| C2K6 | D-2 |
| C2K7 | D-2 |
| C2K8 | C-2 |
| C2K9 | C-2 |
| C2P4 | E-1 |
| C2P5 | E-1 |
| C2P6 | E-1 |
| C2V0 | C-2 |
| C2V1 | C-2 |
| C301 | E-6 |
| C310 | E-6 |
| C311 | E-6 |
| C312 | E-6 |
| C313 | E-5 |
| C314 | E-6 |
| C320 | E-6 |
| C321 | E-6 |
| C322 | E-6 |
| C323 | E-6 |
| C324 | E-6 |
| C352 | E-5 |
| C353 | E-5 |
| C360 | E-5 |
| C361 | E-5 |
| C362 | E-5 |
| C363 | E-5 |
| C364 | E-5 |
| C3A0 | E-4 |
| C3A2 | E-4 |
| C3A4 | E-4 |
| C3A5 | E-5 |
| C3A6 | E-5 |
| C3B1 | E-4 |

| SYMBOL NO. | ADDRESS |
|---|---|
| C3B2 | E-4 |
| C3C0 | E-4 |
| C3C2 | E-4 |
| C3C4 | E-4 |
| C3C5 | E-4 |
| C3C6 | E-4 |
| C3D0 | E-3 |
| C401 | B-6 |
| C402 | B-6 |
| C403 | B-6 |
| C404 | B-6 |
| C405 | C-6 |
| C407 | A-6 |
| C408 | B-6 |
| C409 | B-6 |
| C412 | B-5 |
| C414 | B-6 |
| C502 | B-1 |
| C503 | B-1 |
| C504 | B-2 |
| C505 | B-2 |
| C506 | B-2 |
| C507 | B-2 |
| C508 | B-2 |
| C513 | B-1 |
| C517 | B-1 |
| C518 | B-3 |
| C519 | B-3 |
| C523 | A-1 |
| C525 | A-1 |
| C5A2 | B-4 |
| C5A3 | B-4 |
| C5A6 | B-5 |
| C5A7 | B-3 |
| C5A8 | B-3 |
| C5D0 | B-6 |
| C5E0 | C-6 |
| C5E1 | B-6 |
| C5E2 | B-6 |
| C6A0 | B-2 |
| C6A1 | C-2 |
| C6A2 | B-2 |
| C6A7 | B-2 |
| C6A8 | C-2 |
| C6A9 | B-3 |
| C6B1 | C-2 |
| C6B2 | B-2 |
| C6B9 | C-3 |
| C6C4 | C-2 |
| C6C5 | C-2 |
| C6C6 | C-2 |
| C6C7 | C-1 |
| C6D5 | C-1 |
| C6D6 | C-1 |
| C6D7 | C-1 |
| C6D8 | C-1 |
| C6E0 | C-1 |
| C6E3 | C-3 |
| C6E5 | C-2 |
| C800 | A-3 |

| SYMBOL NO. | ADDRESS |
|---|---|
| C801 | A-2 |
| C803 | A-3 |
| C804 | A-3 |
| C807 | A-2 |
| C809 | B-2 |
| C810 | B-2 |
| C812 | A-3 |
| | |
| CF800 | B-3 |
| | |
| D201 | D-2 |
| D202 | D-3 |
| D204 | C-3 |
| D205 | C-2 |
| D206 | C-3 |
| D207 | D-3 |
| D208 | D-3 |
| D2A1 | E-2 |
| D500 | B-2 |
| D501 | B-1 |
| D5A1 | B-4 |
| D801 | A-3 |
| D802 | B-3 |
| D806 | A-3 |
| D807 | B-3 |
| D809 | B-3 |
| | |
| IC501 | A-2 |
| IC503 | B-2 |
| IC504 | B-2 |
| IC505 | A-1 |
| IC5A2 | B-4 |
| IC802 | A-3 |
| | |
| L202 | E-3 |
| L203 | E-3 |
| L204 | D-3 |
| L293 | B-3 |
| L2A5 | E-2 |
| L2F3 | E-3 |
| L2H0 | E-3 |
| L2H1 | E-3 |
| L2K1 | C-2 |
| L300 | E-6 |
| L320 | E-6 |
| L501 | B-1 |
| L502 | A-2 |
| L503 | B-1 |
| L6A0 | B-2 |
| L6A3 | C-1 |
| L6A4 | C-1 |
| L6A5 | C-2 |
| L6A6 | C-2 |
| | |
| Q200 | D-3 |
| Q202 | D-3 |
| Q203 | D-3 |
| Q222 | D-3 |
| Q223 | D-3 |
| Q224 | D-3 |

| SYMBOL NO. | ADDRESS |
|---|---|
| Q225 | D-3 |
| Q226 | C-3 |
| Q227 | C-3 |
| Q292 | C-3 |
| Q295 | B-3 |
| Q2A5 | E-2 |
| Q2A6 | E-2 |
| Q2A8 | E-2 |
| Q2B0 | D-2 |
| Q2F4 | E-3 |
| Q2F5 | E-3 |
| Q2H1 | E-3 |
| Q2P1 | E-1 |
| Q2V0 | C-1 |
| Q2V1 | C-2 |
| Q3A1 | D-1 |
| Q3D0 | D-3 |
| Q401 | B-6 |
| Q404 | B-5 |
| Q406 | B-5 |
| Q500 | B-1 |
| Q5A0 | B-5 |
| Q5A1 | B-4 |
| Q5A2 | B-7 |
| Q5A3 | B-3 |
| Q5A4 | B-4 |
| Q6A5 | C-2 |
| | |
| R204 | D-3 |
| R206 | E-3 |
| R207 | C-3 |
| R208 | E-3 |
| R215 | E-3 |
| R217 | D-3 |
| R218 | E-3 |
| R219 | D-3 |
| R220 | D-3 |
| R221 | D-2 |
| R223 | D-3 |
| R224 | D-3 |
| R225 | D-3 |
| R228 | C-3 |
| R229 | C-3 |
| R231 | D-3 |
| R232 | D-3 |
| R233 | C-3 |
| R234 | C-3 |
| R235 | C-3 |
| R238 | C-3 |
| R239 | C-3 |
| R240 | C-3 |
| R241 | D-3 |
| R242 | C-3 |
| R243 | C-3 |
| R244 | C-3 |
| R247 | C-3 |
| R248 | C-3 |
| R249 | C-3 |
| R250 | C-3 |
| R251 | C-3 |

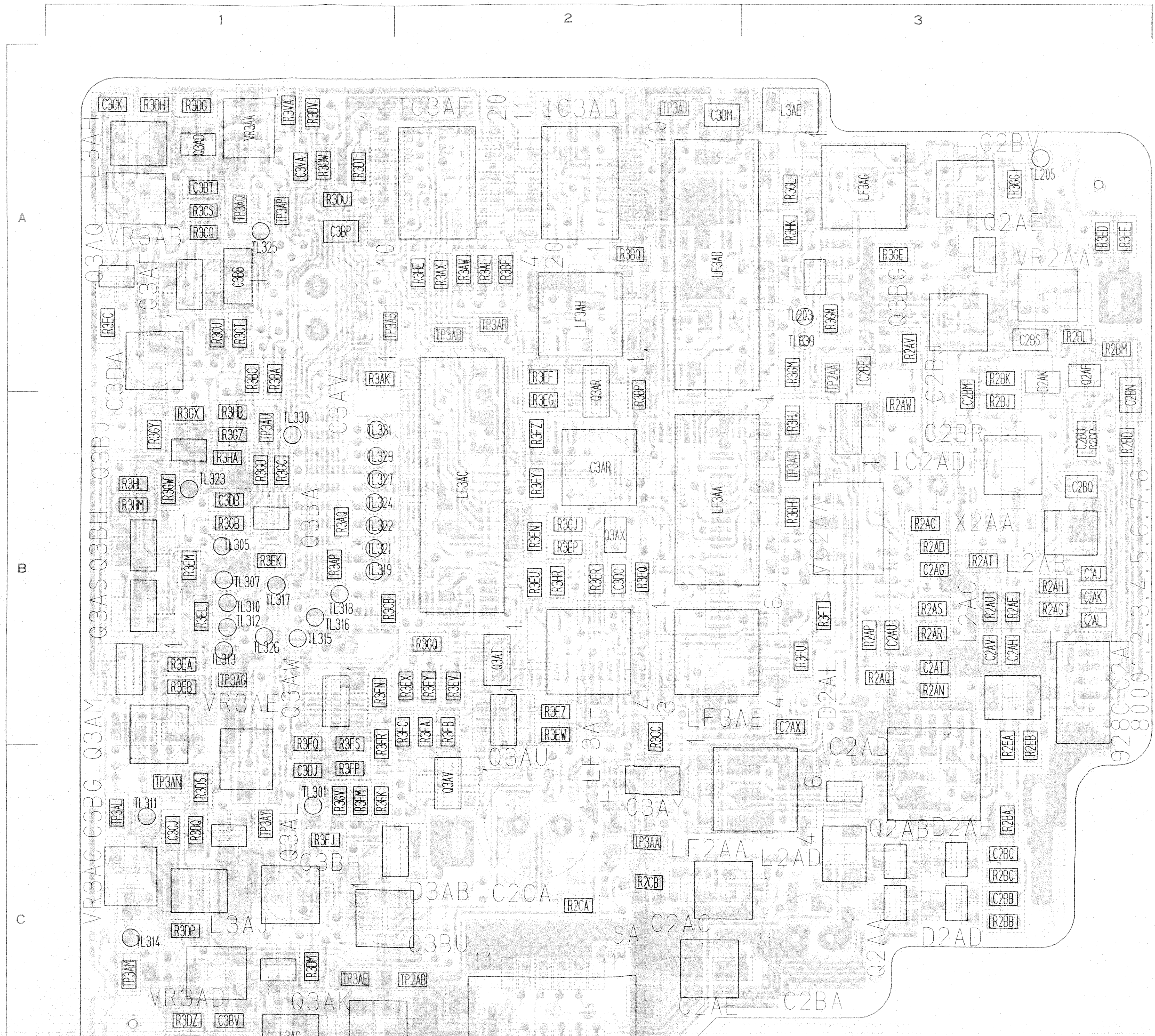
| SYMBOL NO. | ADDRESS |
|---|---|
| R252 | C-2 |
| R253 | C-3 |
| R254 | C-3 |
| R256 | D-3 |
| R257 | D-3 |
| R258 | C-3 |
| R259 | D-3 |
| R264 | D-2 |
| R266 | D-2 |
| R268 | D-3 |
| R269 | D-3 |
| R270 | D-3 |
| R271 | D-3 |
| R275 | D-3 |
| R279 | C-2 |
| R293 | C-4 |
| R295 | C-4 |
| R296 | C-3 |
| R297 | C-3 |
| R2A3 | E-2 |
| R2A4 | E-2 |
| R2B3 | E-2 |
| R2B4 | E-2 |
| R2B5 | E-2 |
| R2B6 | E-2 |
| R2B8 | E-2 |
| R2B9 | E-1 |
| R2C2 | E-2 |
| R2C3 | D-1 |
| R2C7 | E-2 |
| R2C8 | E-2 |
| R2C9 | D-2 |
| R2D7 | E-2 |
| R2E0 | E-2 |
| R2E1 | D-2 |
| R2E2 | E-3 |
| R2E6 | D-2 |
| R2G1 | E-3 |
| R2G2 | E-3 |
| R2G3 | E-3 |
| R2H4 | E-3 |
| R2H5 | E-3 |
| R2J6 | D-2 |
| R2J8 | D-2 |
| R2J9 | D-2 |
| R2K0 | D-2 |
| R2K1 | D-2 |
| R2K2 | D-2 |
| R2K3 | D-2 |
| R2K4 | D-2 |
| R2P4 | E-1 |
| R2P7 | E-2 |
| R2V0 | C-2 |
| R2V1 | C-1 |
| R2V2 | C-2 |
| R2V3 | C-2 |
| R308 | E-6 |
| R311 | E-6 |
| R314 | E-6 |
| R315 | E-6 |

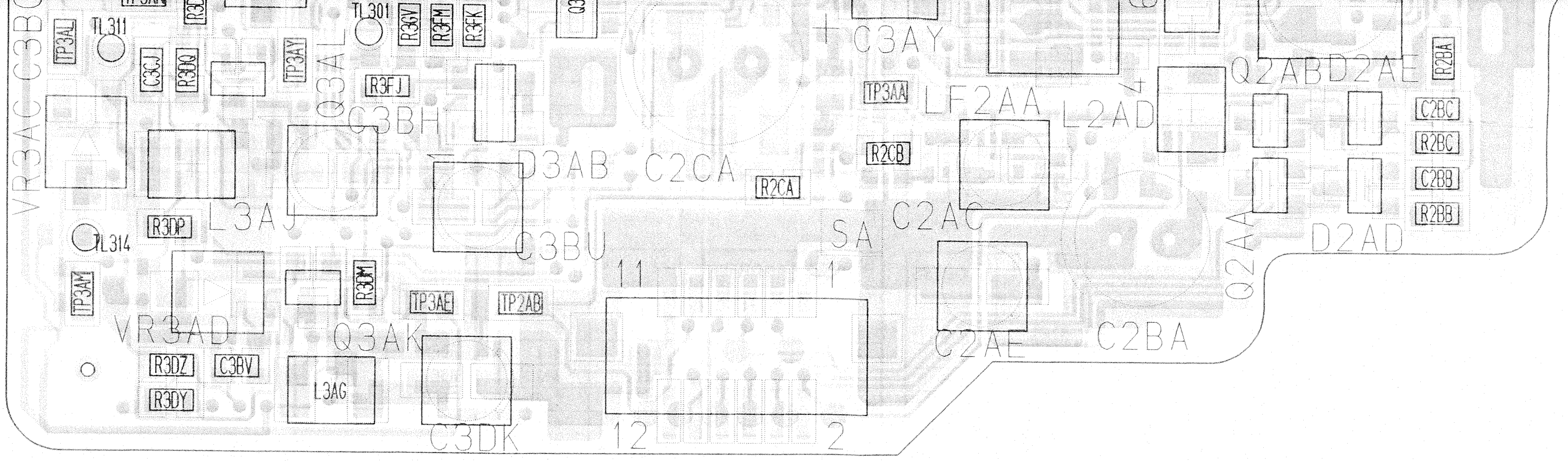
| SYMBOL NO. | ADDRESS |
|---|---|
| R318 | E-6 |
| R319 | E-5 |
| R325 | E-6 |
| R352 | E-5 |
| R3A7 | D-1 |
| R3C0 | E-4 |
| R3C2 | E-4 |
| R3C6 | D-1 |
| R3C7 | D-1 |
| R3D0 | D-4 |
| R3D7 | D-4 |
| R3D8 | D-4 |
| R401 | B-6 |
| R402 | B-6 |
| R403 | B-6 |
| R404 | B-6 |
| R405 | B-6 |
| R406 | B-6 |
| R408 | B-6 |
| R410 | B-6 |
| R411 | B-5 |
| R412 | B-6 |
| R414 | C-6 |
| R415 | C-6 |
| R435 | B-6 |
| R436 | B-6 |
| R439 | B-5 |
| R500 | B-2 |
| R501 | B-2 |
| R502 | B-2 |
| R505 | B-1 |
| R507 | B-2 |
| R508 | B-2 |
| R509 | B-1 |
| R510 | B-1 |
| R511 | B-1 |
| R513 | B-1 |
| R518 | B-2 |
| R528 | A-1 |
| R5A1 | B-4 |
| R5A2 | B-4 |
| R5A3 | B-5 |
| R5A4 | B-5 |
| R5A5 | B-5 |
| R5A6 | B-5 |
| R5A7 | B-5 |
| R5A8 | B-5 |
| R5A9 | B-4 |
| R5B1 | B-5 |
| R5B2 | B-5 |
| R5B3 | B-5 |
| R5B4 | B-4 |
| R5B5 | B-5 |
| R5B7 | B-5 |
| R5B8 | B-4 |
| R5C1 | B-5 |
| R5C2 | B-6 |
| R5D2 | B-6 |
| R5D3 | B-6 |
| R5E0 | B-3 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R5E2 | B-3 |
| R5E3 | B-4 |
| R5E4 | B-4 |
| R5E5 | B-6 |
| R6A0 | C-2 |
| R6A1 | C-2 |
| R6A2 | C-1 |
| R6A3 | B-2 |
| R6A4 | B-2 |
| R6C1 | C-3 |
| R6C2 | C-3 |
| R6C4 | C-2 |
| R6C5 | C-2 |
| R6D2 | B-3 |
| R6D3 | C-1 |
| R6D4 | C-1 |
| R6D5 | C-1 |
| R6D6 | C-1 |
| R6D7 | C-1 |
| R6E1 | C-2 |
| R6E4 | C-2 |
| R6E5 | C-2 |
| R6E6 | C-2 |
| R6E7 | C-2 |
| R6F2 | C-1 |
| R6J7 | C-2 |
| R807 | A-2 |
| R808 | A-3 |
| R809 | B-2 |
| R810 | A-2 |
| R812 | A-3 |
| R813 | A-3 |
| R817 | A-3 |
| R818 | A-2 |
| R820 | A-2 |
| R821 | A-2 |
| R822 | A-2 |
| R823 | B-2 |
| R833 | A-3 |
| R840 | A-3 |
| R841 | A-3 |
| R842 | A-3 |
| R843 | A-3 |
| R852 | B-2 |
| R860 | A-3 |
| | |
| TP25 | E-1 |
| TP29 | D-2 |
| TP2A | D-2 |
| TP2C | E-2 |
| TP2E | E-2 |
| TP2K | E-1 |
| TP2M | D-2 |
| TP2S | D-2 |
| TP2V | E-2 |
| TP2X1 | C-3 |
| TP2X2 | C-4 |
| TP2Y | C-4 |
| TP3A | E-3 |
| TP3E | E-6 |

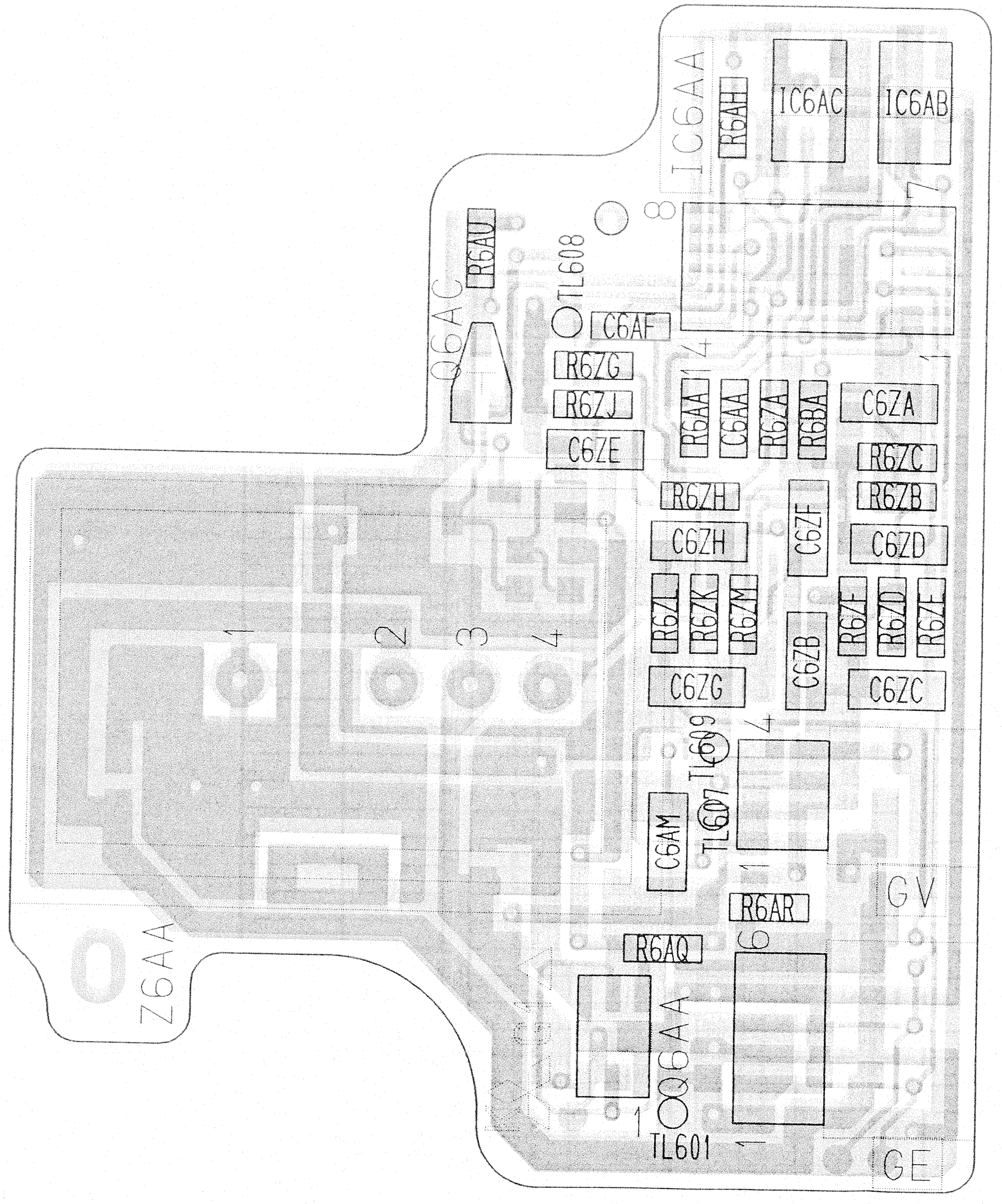
| SYMBOL NO. | ADDRESS |
|---|---|
| TP3F | E-6 |
| TP3H | D-4 |
| TP3L | E-3 |
| TP3R | D-4 |
| TP3X1 | D-3 |
| TP3X2 | D-3 |
| TP3Y | D-3 |
| TP500 | B-2 |
| TP5A | B-4 |
| TP5P | C-4 |
| TP5Q | C-7 |
| TP5R | B-4 |
| TP5S | B-7 |
| TP5X | E-3 |
| TP6G | D-1 |
| TP6J | C-2 |
| TP6X | C-2 |
| TP8A | B-3 |
| TP8D | B-4 |
| TP8E | A-1 |
| | |
| VC500 | B-2 |
| VC6A1 | C-1 |
| VC800 | B-2 |
| | |
| VR2A0 | D-2 |
| VR2A1 | D-1 |
| VR320 | E-6 |
| VR3A0 | E-4 |
| VR3A1 | E-4 |
| VR3C0 | E-4 |
| VR3C1 | E-4 |
| VR3D0 | D-4 |
| VR5A0 | B-4 |
| VR5A1 | B-4 |
| | |
| X5A0 | A-5 |
| X6A1 | C-1 |
| X800 | A-3 |
| | |
| Z5A0 | B-7 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

PCB-SD/PC(A SIDE)

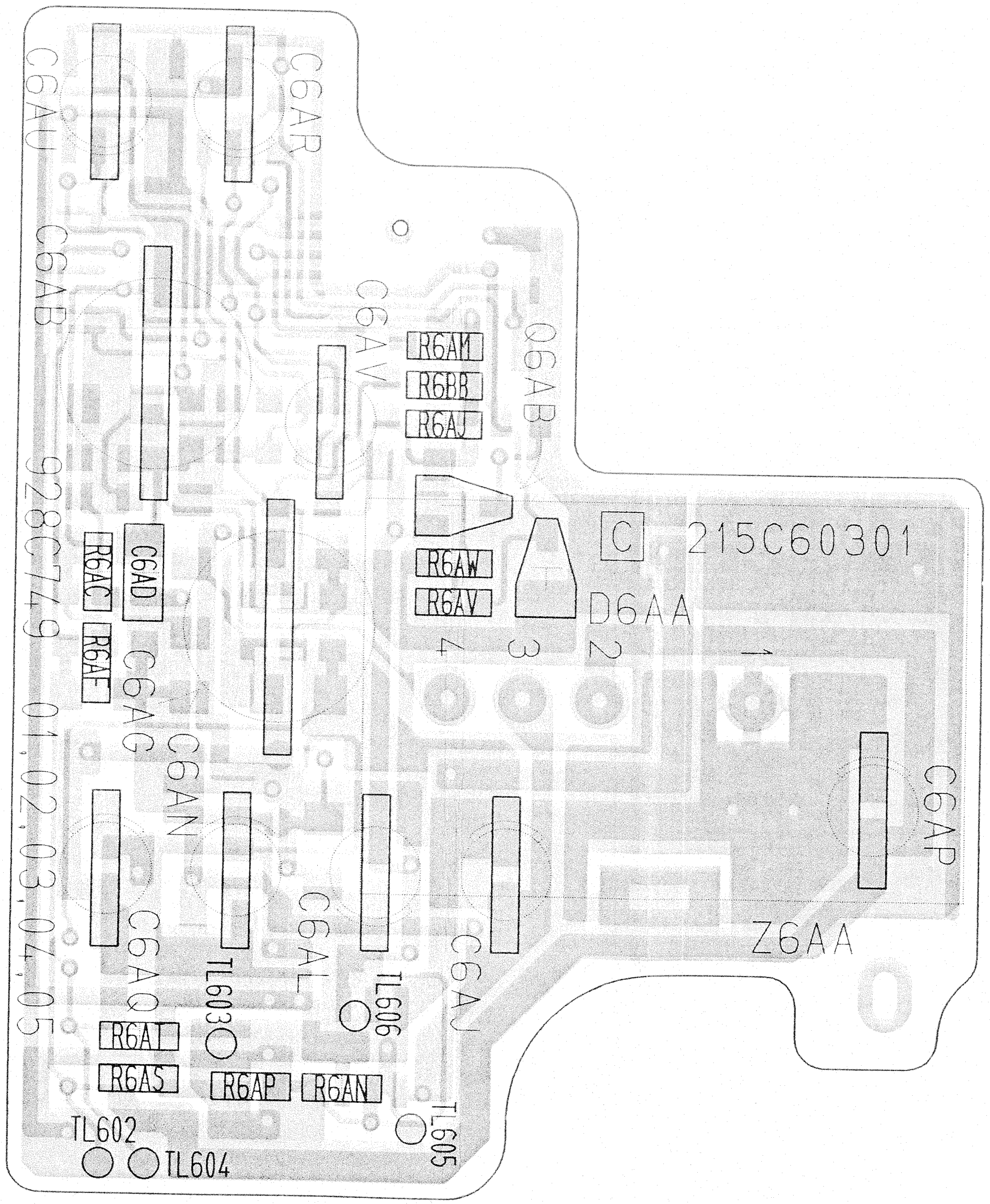

1
2
3
A
B
C
C3CK
R3DH
R3DG
VR3AA
R3VA
R3DV
IC3AE
IC3AD
TP3AJ
C3BM
L3AE
C2BV
TL205
L3AH
Q3AD
C3VA
R3DW
R3DT
C3BT
R3CS
R3CQ
TP3AQ
TP3AP
R3DU
C3BP
LF3AG
R3GG
Q2AE
R3ED
R3EE
VR3AB
Q3AQ
TL325
Q3AF
C3BB
R3HE
R3AX
R3AW
R3AL
R3BF
R3BQ
LF3AB
R3GL
R3HK
R3GE
VR2AA
R3EC
R3GU
R3CT
TP3AS
TP3AB
TP3AR
LF3AH
TL203
TL839
R3GN
Q3BG
R2AV
C2BS
R2BL
R2BM
C3DA
R3BC
R3BA
R3AK
R3EF
R3EG
Q3AR
R3BP
R3GM
TP2AA
C2BE
C2BU
R2BK
R2BJ
D2AN
Q2AF
C2BN
R2AW
C2BM
Q3BJ
C3AV
R3GX
R3HB
R3GY
R3GZ
TP3AU
TL330
TL331
TL329
TL327
TL324
TL322
TL321
TL319
R3HA
R3FZ
C3AR
R3HJ
C2BR
IC2AD
C2BV
R2DD
R2BD
R3HL
R3GW
TL323
R3GQ
R3GC
R3HM
C3DB
R3GB
Q3BA
R3AQ
LF3AC
R3FY
LF3AA
TP3AT
R3BH
C2BQ
Q3BH
TL305
R3EM
R3EN
R3CJ
R3EP
Q3AX
VC2AA
R2AC
X2AA
R2AD
R3EK
R3AP
R2AT
C2AG
L2AB
TL307
TL317
TL318
TL316
TL310
TL312
R3EL
R3EU
R3HR
R3ER
C3DC
R3EQ
C2AJ
R2AH
C2AK
R2AG
C2AL
Q3AS
R3CB
R2AU
R2AE
R2AS
L2AC
R3FT
R2AP
C2AU
R2AR
C2AV
C2AH
TL326
TL315
TL313
R3GQ
Q3AT
R3FU
D2AL
R3EA
R3EB
TP3AG
VR3AE
Q3AW
R3FN
R3EX
R3EY
R3EV
R2AQ
C2AT
R2AN
Q3AM
R3EZ
R3EW
Q3AF
LF3AE
C2AX
R3FC
R3FA
R3FB
R3FQ
R3FS
R3FR
R3CC
C2AD
R2EA
R2EB
C2AF
Q3AU
C3DJ
R3FP
Q3AV
TP3AN
R3DS
Q3BG
TL301
R3GV
R3EM
R3FK
C3AY
TP3AL
TL311
C3CJ
R3DQ
TP3AY
Q3AL
R3FJ
TP3AA
LF2AA
L2AD
Q2AB
D2AE
R2BA
C3BH
C2BC
R2BC
VR3AC
L3AJ
D3AB
C2CA
R2CB
R2CA
C2BB
R2BB
TL314
R3DP
C3BU
SA
C2AC
Q2AA
D2AD
TP3AM
R3DM
TP3AE
TP2AB
VR3AD
Q3AK
R3DZ
C3BV
C2AE
C2BA
L3AG
928C C2AE
80001 2 3 4 5 6 7 8


TL311
TP3AL
C3CJ
R3DN
TP3AY
TL301
R36V
R3EM
R3FK
C3AY
Q2AB
D2AE
R2BA
VR3AC
C3BC
Q3AL
R3FJ
TP3AA
LF2AA
L2AD
C2BC
R2BC
C2BB
R2BB
C3BH
D3AB
C2CA
R2CB
R2CA
L3AJ
R3DP
TL314
C3BU
SA
C2AC
Q2AA
D2AD
11
1
TP3AM
R3DM
TP3AE
TP2AB
VR3AD
Q3AK
C2AE
C2BA
R3DZ
C3BV
R3DY
L3AG
C3DK
12
2

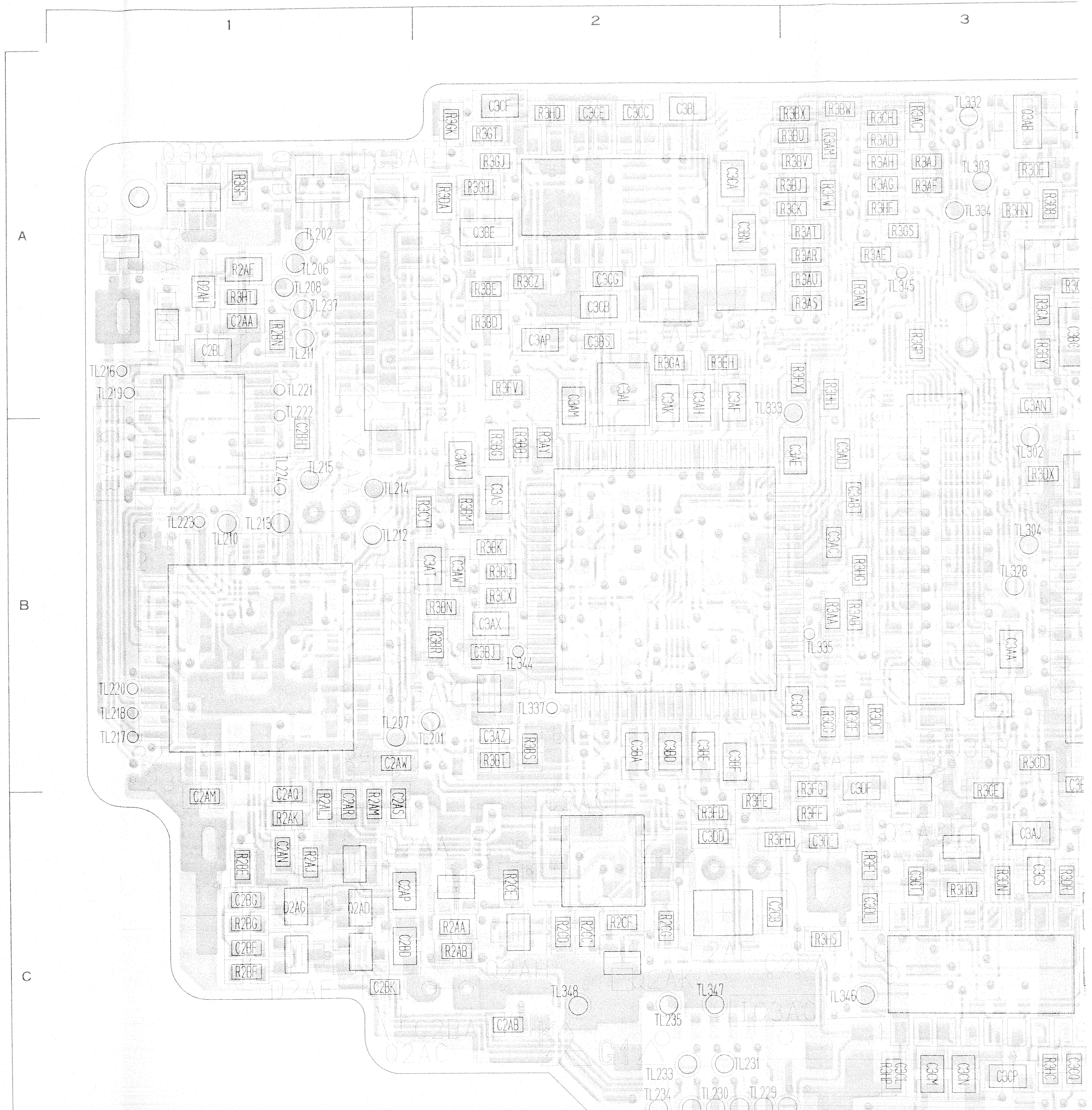
PCB-GYRO SENS(A SIDE)


IC6AA
R6AH
IC6AC
IC6AB
8
7
R6AU
TL608
Q6AC
C6AF
R6ZG
R6ZJ
C6ZE
14
R6AA
C6AA
R6ZA
R6BA
C6ZA
R6ZC
R6ZB
R6ZH
C6ZH
C6ZF
C6ZD
R6ZL
R6ZK
R6ZM
C6ZB
R6ZF
R6ZD
R6ZE
1
2
3
4
C6ZG
C6ZC
TL609
4
TL607
C6AM
1
R6AR
GV
R6AQ
Z6AA
Q6AA
TL601
1
GE

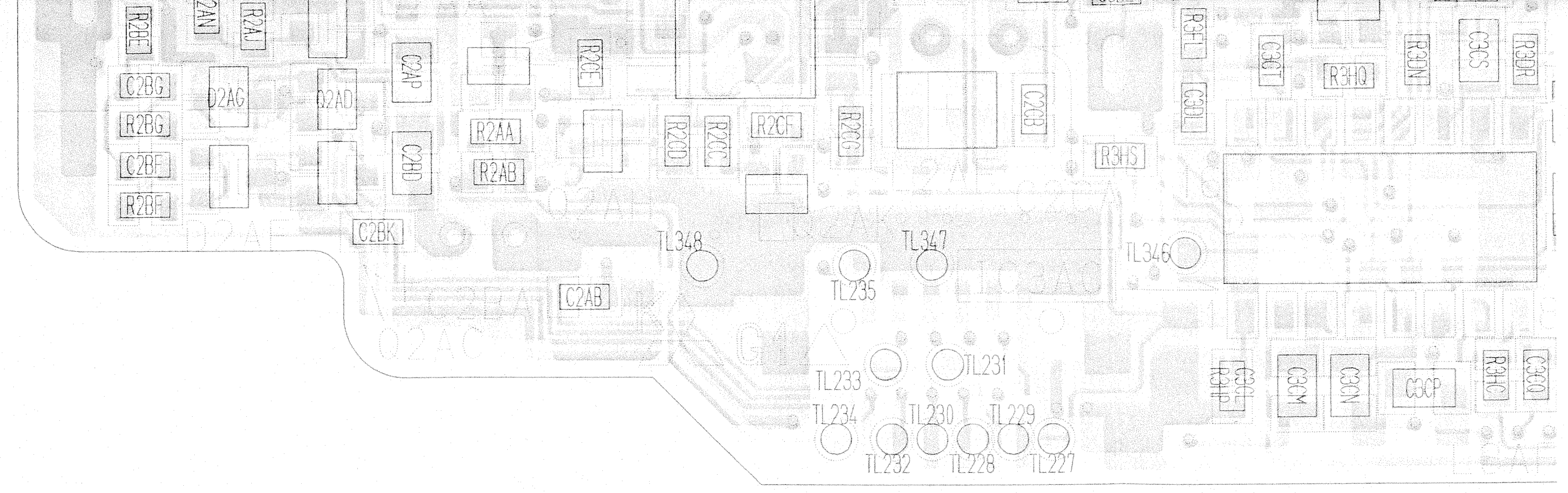
PCB-GYRO SENS(B SIDE)


C6AU
C6AR
C6AB
C6AV
R6AM
R6BB
R6AJ
Q6AB
928C749
C
215C60301
R6AC
C6AD
R6AF
C6AG
R6AW
R6AV
D6AA
4
3
2
1
C6AN
C6AP
01 02 03 04 05
C6AQ
TL603
C6AL
TL606
C6AJ
Z6AA
R6AT
R6AS
R6AP
R6AN
TL602
TL604
TL605

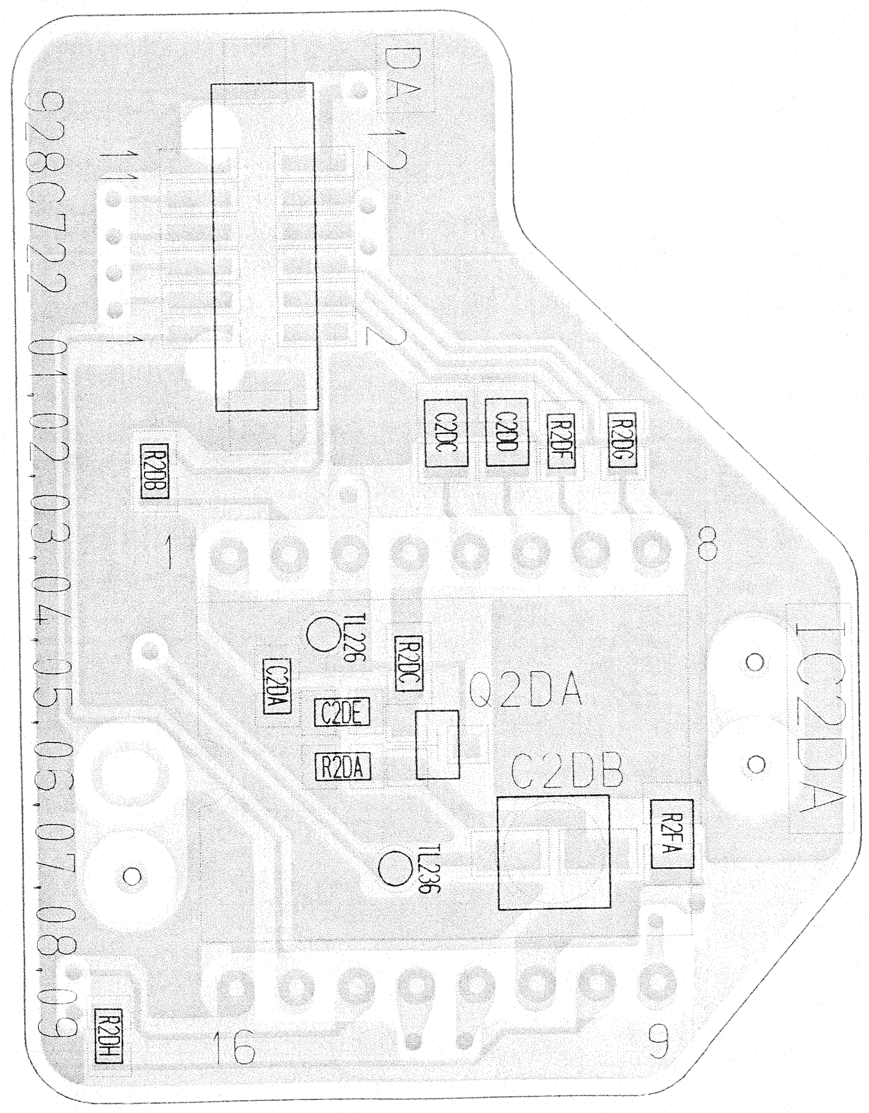
## PCB-SD/PC(B SIDE)


1
2
3
A
B
C
C3CF
R3HD
C3CE
C3CC
C3BL
R3BX
R3BW
R3CH
R3AC
TL332
C3AB
R3GK
R3GT
R3GJ
R3BU
R3AM
R3AD
R3BV
R3AH
R3AJ
TL303
R3DF
R3GE
R3DA
R3GH
C3CA
R3BJ
R3AG
R3AF
R3CK
R3HF
TL334
R3HN
R3DB
C3BE
C3BN
R3AT
R3GS
TL202
R3AR
R3AE
R2AF
TL206
D2AH
R3HT
TL208
R3BE
R3CZ
C3CG
R3AU
TL345
TL237
C2AA
C3CB
R3AS
R3AN
R3GA
R2BN
R3BD
R3CP
R3BY
C3BC
C2BL
TL211
C3AP
C3BS
TL216
R3GA
R3EH
TL219
TL221
R3FV
C3AM
C3AL
C3AK
C3AH
C3AE
R3FX
R3HT
C3AN
TL222
TL333
C2BH
R3BG
R3BB
R3AY
C3AE
C3AU
TL302
R3DX
TL224
TL215
C3AU
TL214
C3AS
R3BM
R3CY
C3AB
TL223
TL213
TL210
TL212
C3AC
TL304
R3BK
R3HG
C3AT
C3AW
R3BL
TL328
R3CX
R3BN
R3AA
R3AB
C3AX
R3BR
C3BJ
TL335
C3AA
TL344
TL220
TL337
TL218
TL207
C3DG
R3CC
R3CF
R3DC
TL217
TL201
C3AZ
R3BS
C3BA
C3BD
C3BE
C3BF
R3BT
R3CD
C2AW
C2AM
C2AQ
R2AL
C2AR
R2AM
C2AS
R3FG
C3DF
R3FE
R3CE
R2AK
R3FD
R3FF
C3DD
R3FH
C3DE
C3AJ
R2BE
C2AN
R2AJ
R2CE
R3FI
C3GT
R3HQ
R3DN
C3CS
R3DR
C2AP
C2BG
D2AG
D2AD
C2CB
C3DL
R2BG
R2AA
R2DD
R2CC
R2CF
R2CG
R3HS
C2BF
C2BD
R2AB
R2BF
C2BK
TL348
TL347
TL346
TL235
C2AB
TL233
TL231
TL234
TL230
TL229
R3HP
C3CM
C3CN
C3CP
R3HC
C3CQ

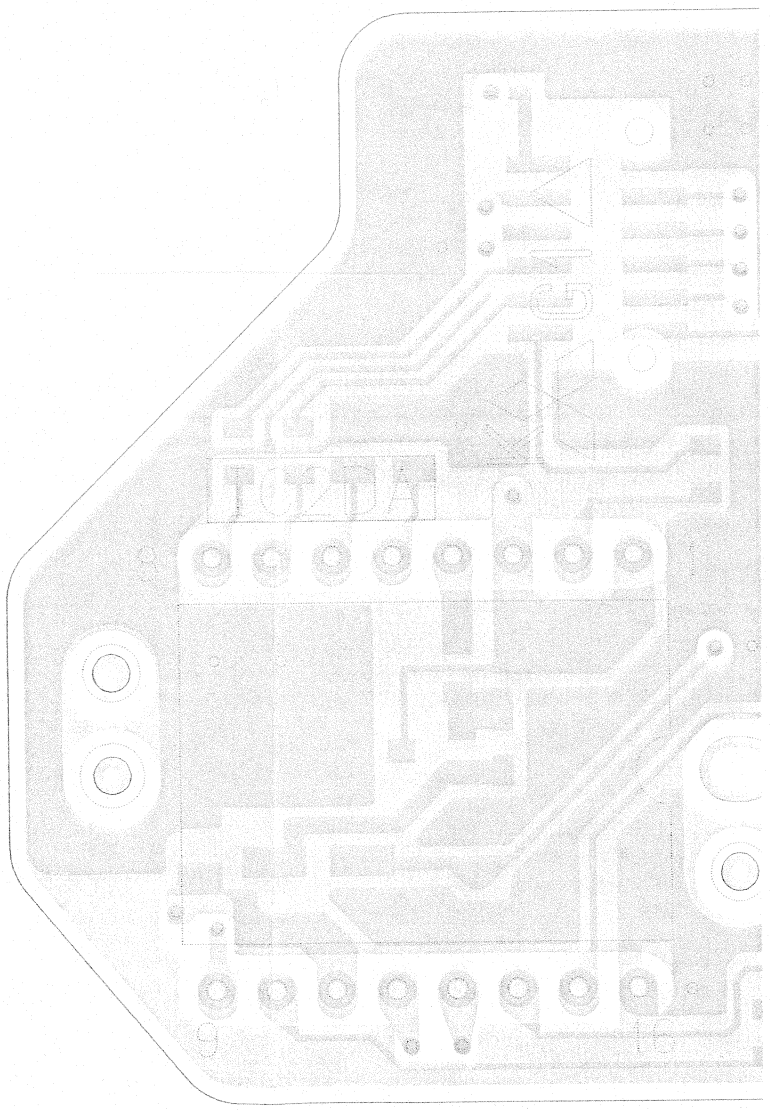
C


R2BE
2AN
R2AJ
C2BG
Q2AG
Q2AD
C2AP
R2CE
R3FC
C3GT
R3HQ
R3GN
C3CS
R3GR
R2BG
C2BF
R2BF
C2BD
R2AA
R2AB
R2CD
R2CC
R2CF
R2CG
C2CB
C3GL
R3HS
C2BK
TL348
TL347
TL346
TL235
C2AB
TL233
TL231
TL234
TL230
TL229
TL232
TL228
TL227
R3JP
C3GM
C3GN
C3GP
R3HC
C3GQ

PCB-CCD(A SIDE)


DA
12
11
1
2
928C722 01,02,03,04,05,06,07,08,09
R2DB
C2DC
C2DD
R2DF
R2DG
1
8
TL226
R2DC
C2DA
C2DE
R2DA
Q2DA
C2DB
IC2DA
R2FA
TL236
R2DH
16
9

PCB-CCD(B SIDE)


IC2DA
8
1
9
16

## PCB – SD/PC (A SIDE)

| SYMBOL NO. | ADDRESS |
|---|---|
| C2AC | C-2 |
| C2AD | C-3 |
| C2AE | C-2 |
| C2AF | B-3 |
| C2AG | B-3 |
| C2AH | B-3 |
| C2AJ | B-3 |
| C2AK | B-3 |
| C2AL | B-3 |
| C2AT | B-3 |
| C2AU | B-3 |
| C2AV | B-3 |
| C2AX | B-3 |
| C2BA | C-3 |
| C2BB | C-3 |
| C2BC | C-3 |
| C2BE | A-3 |
| C2BG | C-1 |
| C2BJ | A-3 |
| C2BM | B-3 |
| C2BN | B-3 |
| C2BQ | B-3 |
| C2BR | B-3 |
| C2BS | A-3 |
| C2BU | B-3 |
| C2BV | A-3 |
| C2CA | C-2 |
| C3AR | B-2 |
| C3AV | B-1 |
| C3AY | C-2 |
| C3BH | C-1 |
| C3BM | A-2 |
| C3BP | A-1 |
| C3BT | A-1 |
| C3BU | C-2 |
| C3BV | C-1 |
| C3CJ | C-1 |
| C3CK | A-1 |
| C3DA | A-1 |
| C3DB | B-1 |
| C3DC | B-2 |
| C3DD | A-1 |
| C3DJ | C-1 |
| C3DK | C-1 |
| C3VA | A-1 |
| | |
| D2AD | C-3 |
| D2AE | C-3 |
| D2AK | A-3 |
| D2AL | B-3 |
| D3AB | C-2 |
| | |
| IC2AD | B-3 |
| IC3AD | A-2 |
| IC3AE | A-2 |
| | |
| L2AB | B-3 |
| L2AC | B-3 |
| L2AD | C-3 |
| L3AE | A-3 |

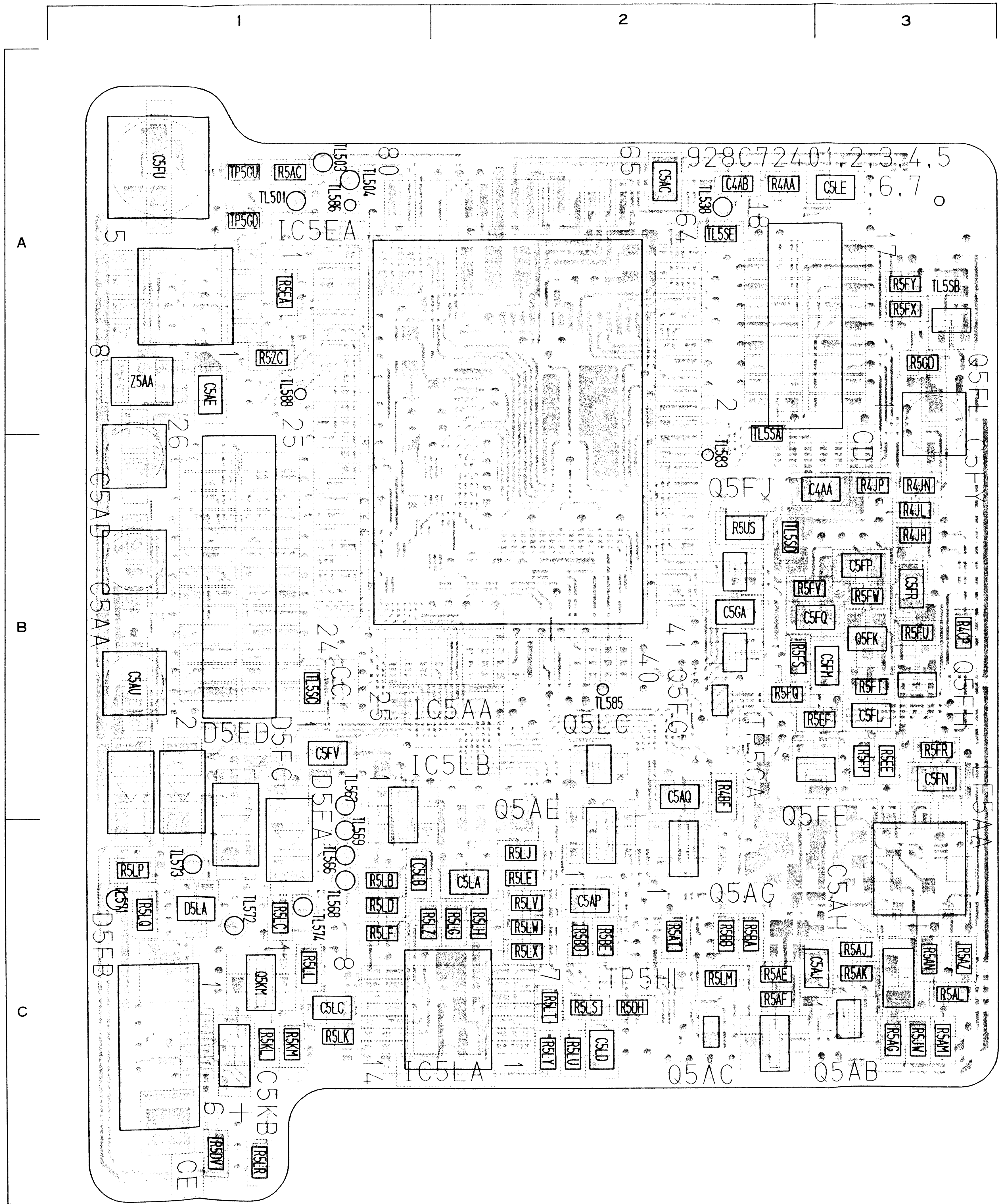
| SYMBOL NO. | ADDRESS |
|---|---|
| L3AG | C-1 |
| L3AH | A-1 |
| L3AJ | C-1 |
| | |
| LF2AA | C-2 |
| LF3AA | B-2 |
| LF3AB | A-2 |
| LF3AC | B-2 |
| LF3AE | B-2 |
| LF3AF | B-2 |
| LF3AG | A-3 |
| LF3AH | A-2 |
| | |
| Q2AA | C-3 |
| Q2AB | C-3 |
| Q2AE | A-3 |
| Q2AF | A-3 |
| Q3AD | A-1 |
| Q3AF | A-1 |
| Q3AK | C-1 |
| Q3AL | C-1 |
| Q3AM | B-1 |
| Q3AQ | A-1 |
| Q3AR | A-2 |
| Q3AS | B-1 |
| Q3AT | B-2 |
| Q3AU | C-2 |
| Q3AV | C-2 |
| Q3AW | B-1 |
| Q3AX | B-2 |
| Q3BA | B-1 |
| Q3BG | A-3 |
| Q3BH | B-1 |
| Q3BJ | B-1 |
| | |
| R2AC | B-3 |
| R2AD | B-3 |
| R2AE | B-3 |
| R2AG | B-3 |
| R2AH | B-3 |
| R2AN | B-3 |
| R2AP | B-3 |
| R2AQ | B-3 |
| R2AR | B-3 |
| R2AS | B-3 |
| R2AT | B-3 |
| R2AU | B-3 |
| R2AV | A-3 |
| R2AW | B-3 |
| R2BA | C-3 |
| R2BB | C-3 |
| R2BC | C-3 |
| R2BD | B-3 |
| R2BJ | B-3 |
| R2BK | A-3 |
| R2BL | A-3 |
| R2BM | A-3 |
| R2BP | B-3 |
| R2CA | C-2 |
| R2CB | C-2 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R2EA | C-3 |
| R2EB | C-3 |
| R3AK | A-1 |
| R3AL | A-2 |
| R3AP | B-1 |
| R3AQ | B-1 |
| R3AW | A-2 |
| R3AX | A-2 |
| R3BA | A-1 |
| R3BC | A-1 |
| R3BF | A-2 |
| R3BH | B-3 |
| R3BP | B-2 |
| R3BQ | A-2 |
| R3CB | B-1 |
| R3CC | B-2 |
| R3CJ | B-2 |
| R3CQ | A-1 |
| R3CS | A-1 |
| R3CT | A-1 |
| R3CU | A-1 |
| R3DG | A-1 |
| R3DH | A-1 |
| R3DM | C-1 |
| R3DP | C-1 |
| R3DQ | C-1 |
| R3DS | C-1 |
| R3DT | A-1 |
| R3DU | A-1 |
| R3DV | A-1 |
| R3DW | A-1 |
| R3DY | C-1 |
| R3DZ | C-1 |
| R3EA | B-1 |
| R3EB | B-1 |
| R3EC | A-1 |
| R3ED | A-3 |
| R3EE | A-3 |
| R3EF | A-2 |
| R3EG | B-2 |
| R3EK | B-1 |
| R3EL | B-1 |
| R3EM | B-1 |
| R3EN | B-2 |
| R3EP | B-2 |
| R3EQ | B-2 |
| R3ER | B-2 |
| R3EU | B-2 |
| R3EV | B-2 |
| R3EW | B-2 |
| R3EX | B-2 |
| R3EY | B-2 |
| R3EZ | B-2 |
| R3FA | B-2 |
| R3FB | B-2 |
| R3FC | B-2 |
| R3FJ | C-1 |
| R3FK | C-1 |
| R3FM | C-1 |
| R3FN | B-1 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R3FP | C-1 |
| R3FQ | B-1 |
| R3FR | B-1 |
| R3FS | B-1 |
| R3FT | B-3 |
| R3FU | B-3 |
| R3FY | B-2 |
| R3FZ | B-2 |
| R3GB | B-1 |
| R3GC | B-1 |
| R3GD | B-1 |
| R3GE | A-3 |
| R3GG | A-3 |
| R3GL | A-3 |
| R3GM | A-3 |
| R3GN | A-3 |
| R3GQ | B-2 |
| R3GV | C-1 |
| R3GW | B-1 |
| R3GX | B-1 |
| R3GY | B-1 |
| R3GZ | B-1 |
| R3HA | B-1 |
| R3HB | B-1 |
| R3HE | A-2 |
| R3HJ | B-3 |
| R3HK | A-3 |
| R3HL | B-1 |
| R3HM | B-1 |
| R3HR | B-2 |
| R3VA | A-1 |
| | |
| TP2AA | A-3 |
| TP2AB | C-2 |
| TP3AA | C-2 |
| TP3AB | A-2 |
| TP3AE | C-1 |
| TP3AG | B-1 |
| TP3AJ | A-2 |
| TP3AL | C-1 |
| TP3AM | C-1 |
| TP3AN | C-1 |
| TP3AP | A-1 |
| TP3AQ | A-1 |
| TP3AR | A-2 |
| TP3AS | A-1 |
| TP3AT | B-3 |
| TP3AU | B-1 |
| TP3AY | C-1 |
| | |
| VC2AA | B-3 |
| | |
| VR2AA | A-3 |
| VR3AA | A-1 |
| VR3AB | A-1 |
| VR3AC | C-1 |
| VR3AD | C-1 |
| VR3AE | B-1 |
| | |
| X2AA | B-3 |

717

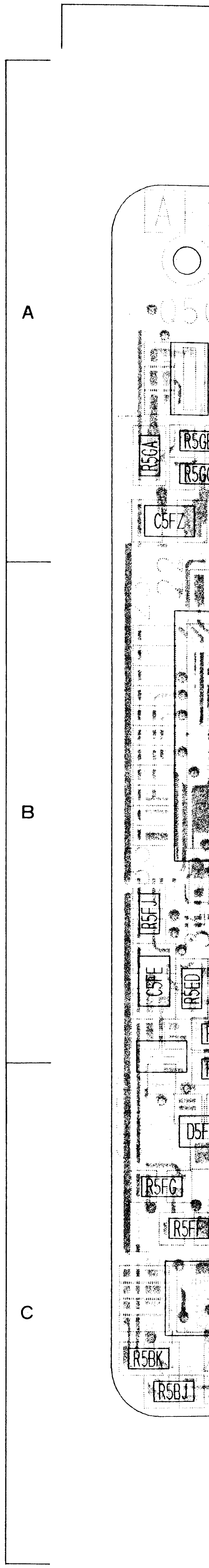
## PCB-CM(A SIDE)


1
2
3
A
B
C
928C72401,2,3,4,5
6,7
C5FU
TP5GU
R5AC
TL501
TL503
TL504
TL586
TP5GD
IC5EA
C5AC
C4AB
R4AA
C5LE
TL538
TL5SE
R5EA
R5FY
R5FX
TL5SB
R5ZC
Z5AA
C5AE
TL588
R5GD
Q5FL
TL55A
TL583
C5AD
C5AA
C5AU
Q5FJ
C4AA
R4JP
R4JN
R4JL
R4JH
R5US
TL55D
C5FP
R5FV
R5FW
C5FR
C5GA
C5FQ
Q5FK
R5FU
R4CP
R5FS
C5FM
TL55C
IC5AA
TL585
Q5LC
Q5FG
R5FQ
R5FT
Q5FH
R5EF
C5FL
D5FD
D5FC
C5FV
IC5LB
D5FA
R5FP
R5EE
R5FR
C5FN
LF5AA
C5AQ
R4BF
Q5AE
Q5FE
TL567
TL569
TL566
TL573
R5LP
R5LB
C5LB
C5LA
R5LJ
R5LE
R5LV
C5AP
Q5AG
C5AH
TL571
R5LQ
D5LA
TL572
R5LC
TL574
R5LD
R5LF
R5LZ
R5LG
R5LH
R5LW
R5LX
R5BD
R5BE
R5AT
R5BB
R5BA
R5AJ
R5AK
R5AN
R5AZ
C5AJ
D5FB
C5KM
R5LL
C5LC
R5LK
R5KM
R5KL
TP5HL
R5LM
R5AE
R5AF
R5AL
R5LT
R5LS
R5DH
C5LD
R5LY
R5LU
IC5LA
Q5AC
Q5AB
R5AG
R5JW
R5AM
C5KB
R5DV
R5LR
CE
CD
CC

PCB – CM (A SIDE)

| SYMBOL NO. | ADDRESS |
|---|---|
| C4AA | B-3 |
| C4AB | A-2 |
| C5AA | B-1 |
| C5AC | A-2 |
| C5AD | B-1 |
| C5AE | A-1 |
| C5AH | C-3 |
| C5AJ | C-3 |
| C5AP | C-2 |
| C5AQ | B-2 |
| C5AU | B-1 |
| C5FL | B-3 |
| C5FM | B-3 |
| C5FN | B-3 |
| C5FP | B-3 |
| C5FQ | B-3 |
| C5FR | B-3 |
| C5FU | A-1 |
| C5FV | B-1 |
| C5FY | B-3 |
| C5GA | B-2 |
| C5KB | C-1 |
| C5LA | C-2 |
| C5LB | C-1 |
| C5LC | C-1 |
| C5LD | C-2 |
| C5LE | A-3 |
| | |
| D5FA | B-1 |
| D5FB | C-1 |
| D5FC | B-1 |
| D5FD | B-1 |
| D5LA | C-1 |
| | |
| IC5AA | B-2 |
| IC5EA | A-1 |
| IC5LA | C-2 |
| IC5LB | B-2 |
| | |
| LF5AA | B-3 |
| | |
| Q5AB | C-3 |
| Q5AC | C-2 |
| Q5AE | B-2 |
| Q5AG | C-2 |
| Q5FE | B-2 |
| Q5FG | B-2 |
| Q5FH | B-3 |
| Q5FJ | B-2 |
| Q5FK | B-3 |
| Q5FL | A-3 |
| Q5KM | C-1 |
| Q5LC | B-2 |
| | |
| R4AA | A-2 |
| R4BF | B-2 |
| R4CP | B-3 |
| R4JH | B-3 |
| R4JL | B-3 |
| R4JN | B-3 |
| R4JP | B-3 |
| R5AC | A-1 |
| R5AE | C-2 |
| R5AF | C-2 |
| R5AG | C-3 |
| R5AJ | C-3 |
| R5AK | C-3 |
| R5AL | C-3 |
| R5AM | C-3 |
| R5AN | C-3 |
| R5AT | C-2 |
| R5AZ | C-3 |
| R5BA | C-2 |
| R5BB | C-2 |
| R5BD | C-2 |
| R5BE | C-2 |
| R5DH | C-2 |
| R5DV | C-1 |
| R5EA | A-1 |
| R5EE | B-3 |
| R5EF | B-3 |
| R5FP | B-3 |
| R5FQ | B-2 |
| R5FR | B-3 |
| R5FS | B-2 |
| R5FT | B-3 |
| R5FU | B-3 |
| R5FV | B-2 |
| R5FW | B-3 |
| R5FX | A-3 |
| R5FY | A-3 |
| R5GD | A-3 |
| R5JW | C-3 |
| R5KL | C-1 |
| R5KM | C-1 |
| R5LB | C-1 |
| R5LC | C-1 |
| R5LD | C-1 |
| R5LE | C-2 |
| R5LF | C-1 |
| R5LG | C-2 |
| R5LH | C-2 |
| R5LJ | C-2 |
| R5LK | C-1 |
| R5LL | C-1 |
| R5LM | C-2 |
| R5LP | C-1 |
| R5LQ | C-1 |
| R5LR | C-1 |
| R5LS | C-2 |
| R5LT | C-2 |
| R5LU | C-2 |
| R5LV | C-2 |
| R5LW | C-2 |
| R5LX | C-2 |
| R5LY | C-2 |
| R5LZ | C-1 |
| R5US | B-2 |
| R5ZC | A-1 |
| | |
| TP5GA | B-2 |
| TP5GD | A-1 |
| TP5GU | A-1 |
| TP5HL | C-2 |
| | |
| Z5AA | A-1 |

PCB-CM(B S

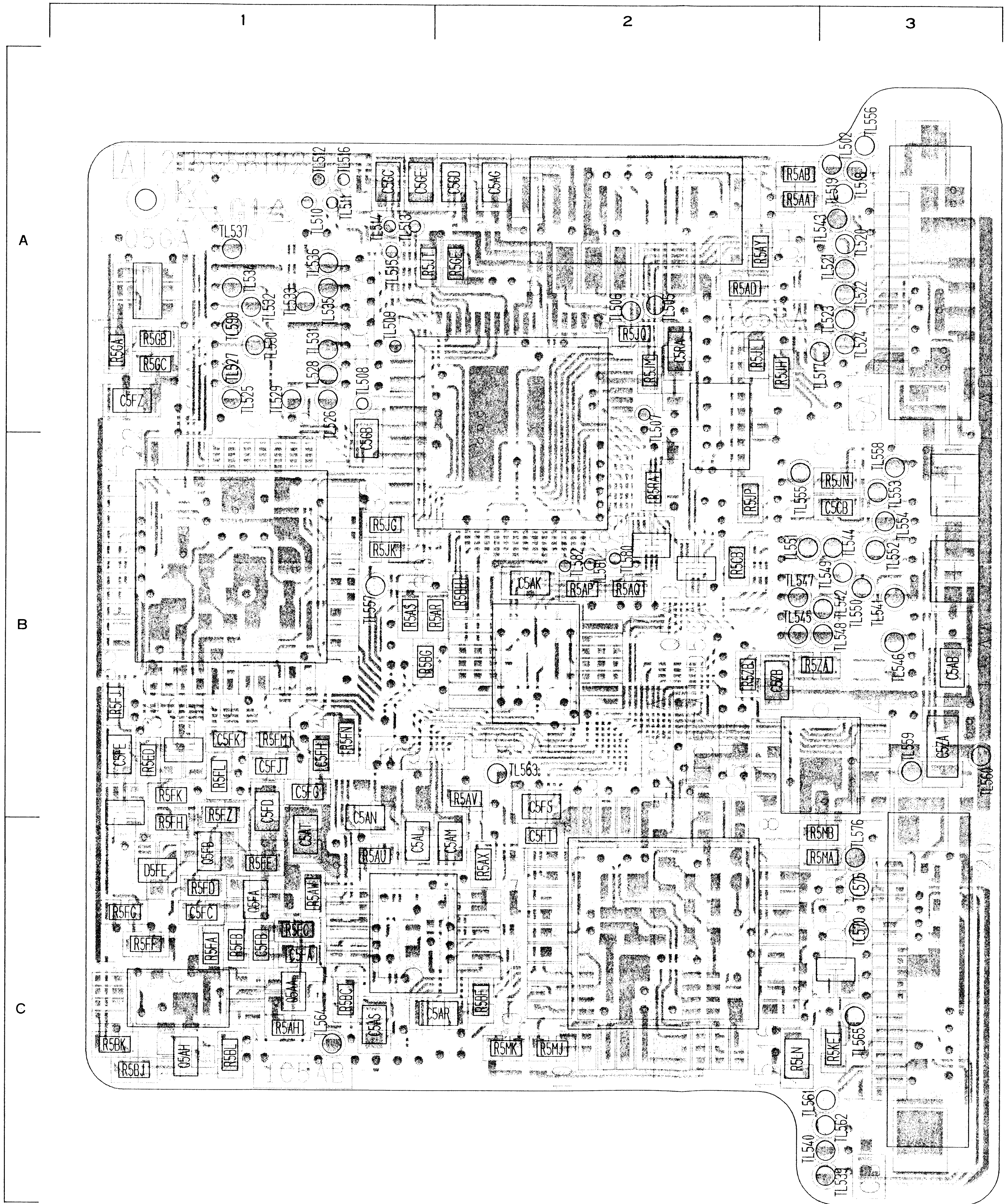

A
B
C
R5GA
C5FZ
R5FJ
C5FE
R5ED
R5FG
R5FP
R5BK
R5BJ

)

| MBOL NO. | ADDRESS |
|---|---|
| 4JP | B-3 |
| 5AC | A-1 |
| 5AE | C-2 |
| 5AF | C-2 |
| 5AG | C-3 |
| 5AJ | C-3 |
| 5AK | C-3 |
| 5AL | C-3 |
| 5AM | C-3 |
| 5AN | C-3 |
| 5AT | C-2 |
| 5AZ | C-3 |
| 5BA | C-2 |
| 5BB | C-2 |
| 5BD | C-2 |
| 5BE | C-2 |
| 5DH | C-2 |
| 5DV | C-1 |
| 5EA | A-1 |
| 5EE | B-3 |
| 5EF | B-3 |
| 5FP | B-3 |
| 5FQ | B-2 |
| 5FR | B-3 |
| 5FS | B-2 |
| 5FT | B-3 |
| 5FU | B-3 |
| 5FV | B-2 |
| 5FW | B-3 |
| 5FX | A-3 |
| 5FY | A-3 |
| 5GD | A-3 |
| 5JW | C-3 |
| 5KL | C-1 |
| 5KM | C-1 |
| 5LB | C-1 |
| 5LC | C-1 |
| 5LD | C-1 |
| 5LE | C-2 |
| 5LF | C-1 |
| 5LG | C-2 |
| 5LH | C-2 |
| 5LJ | C-2 |
| 5LK | C-1 |
| 5LL | C-1 |
| 5LM | C-2 |
| 5LP | C-1 |
| 5LQ | C-1 |
| 5LR | C-1 |
| 5LS | C-2 |
| 5LT | C-2 |
| 5LU | C-2 |
| 5LV | C-2 |
| 5LW | C-2 |
| 5LX | C-2 |
| 5LY | C-2 |
| 5LZ | C-1 |
| 5US | B-2 |
| 5ZC | A-1 |
| | |

| SYMBOL NO. | ADDRESS |
|---|---|
| TP5GA | B-2 |
| TP5GD | A-1 |
| TP5GU | A-1 |
| TP5HL | C-2 |
| | |
| Z5AA | A-1 |

PCB-CM(B SIDE)


1
2
3
A
B
C
Q5GA
TL537
TL510
TL512
TL516
TL511
C5GC
C5GE
C5GD
C5AG
R5AB
R5AA
TL556
TL502
TL518
TL519
TL543
TL520
TL521
TL522
TL523
TL524
TL514
TL513
TL515
R5JT
R5GE
R5AY
R5AD
TL536
TL534
TL533
TL535
TL532
TL599
TL530
TL531
TL527
TL528
TL525
TL529
TL526
TL508
TL509
TL506
TL505
R5JQ
C5RA
R5JM
R5JL
R5JH
TL517
R5GA
R5GB
R5GC
C5FZ
C5GB
TL507
R5RA
R5JP
R5JN
C5CB
TL558
TL553
TL554
TL555
TL551
TL544
TL552
TL549
TL547
TL542
TL550
TL541
TL545
TL548
R5JG
R5JK
TL557
R5AS
R5AR
R5BH
C5AK
R5AP
R5AQ
TL580
TL582
TL581
R5CB
R5BG
R5ZB
C5ZB
R5ZA
TL546
C5AB
R5FJ
R5FN
C5FE
R5ED
C5FK
R5FM
C5FH
R5FL
C5FJ
C5FG
TL563
R5FK
R5FH
R5FZ
C5FD
C5AT
C5AN
C5AL
C5AM
R5AX
R5AV
C5FS
C5FT
TL559
C5ZA
TL564
Q5FB
R5FE
R5AU
D5FE
R5FD
Q5FA
R5AW
R5FG
C5FC
R5FF
R5FA
R5FB
Q5FB
R5FC
C5FA
R5MB
TL576
R5MA
TL575
TL570
Q5AA
R5BC
R5AH
TL564
C5AS
C5AR
R5BF
R5BK
R5BJ
Q5AH
R5BL
R5MK
R5MJ
R5LN
R5KE
TL565
TL561
TL562
TL540
TL539
IC5AB

7/7

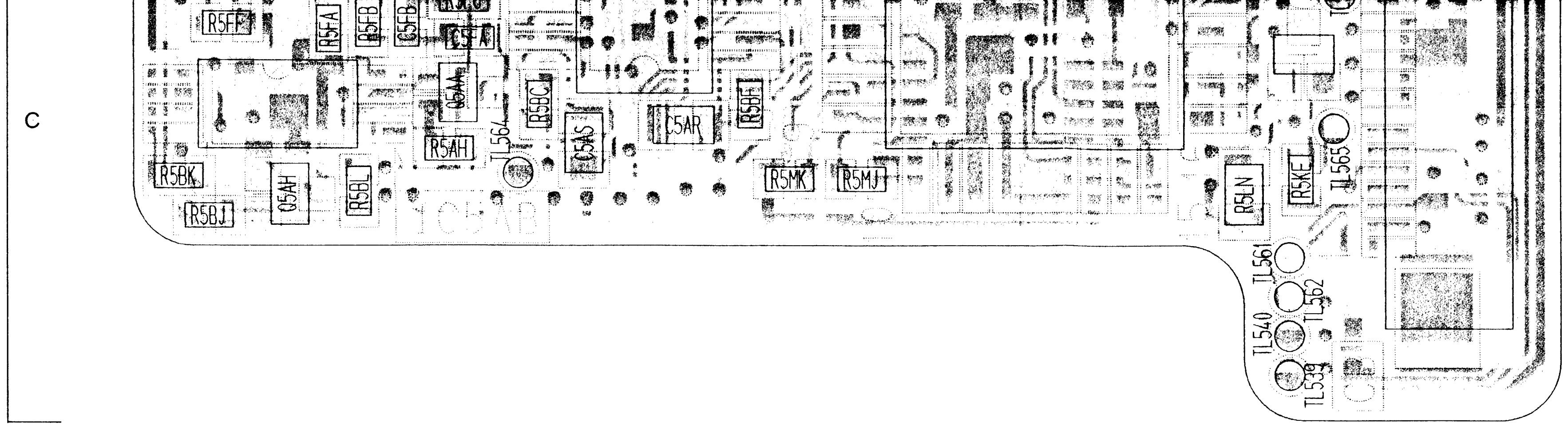
PCB – CM (B SIDE)

| SYMBOL NO. | ADDRESS |
|---|---|
| C5AB | B-3 |
| C5AG | A-2 |
| C5AK | B-2 |
| C5AL | C-1 |
| C5AM | C-2 |
| C5AN | B-1 |
| C5AR | C-2 |
| C5AS | C-1 |
| C5AT | C-1 |
| C5CB | B-3 |
| C5FA | C-1 |
| C5FB | C-1 |
| C5FC | C-1 |
| C5FD | B-1 |
| C5FE | B-1 |
| C5FG | B-1 |
| C5FH | B-1 |
| C5FJ | B-1 |
| C5FK | B-1 |
| C5FS | B-2 |
| C5FT | C-2 |
| C5FZ | A-1 |
| C5GC | A-1 |
| C5GD | A-2 |
| C5GE | A-1 |
| C5RA | A-2 |
| C5ZA | B-3 |
| C5ZB | B-2 |
| | |
| D5CA | B-2 |
| D5FE | C-1 |
| | |
| IC4AA | A-1 |
| IC5AB | C-1 |
| IC5AC | B-1 |
| IC5AE | B-2 |
| IC5FA | B-2 |
| IC5GA | A-1 |
| IC5RA | A-2 |
| IC5ZA | B-2 |
| | |
| L5AA | B-3 |
| L5AD | A-3 |
| | |
| Q5AA | C-1 |
| Q5AD | B-2 |
| Q5AH | C-1 |
| Q5FA | C-1 |
| Q5FB | C-1 |
| Q5FC | C-1 |
| Q5FD | B-1 |
| Q5GA | A-1 |
| Q5LB | C-3 |
| | |
| R4FE | C-1 |
| R5AA | A-2 |
| R5AB | A-2 |
| R5AD | A-2 |
| R5AH | C-1 |
| R5AP | B-2 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R5AQ | B-2 |
| R5AR | B-2 |
| R5AS | B-1 |
| R5AU | C-1 |
| R5AV | B-2 |
| R5AW | C-1 |
| R5AX | C-2 |
| R5AY | A-2 |
| R5BC | C-1 |
| R5BF | C-2 |
| R5BG | B-1 |
| R5BH | B-2 |
| R5BJ | C-1 |
| R5BK | C-1 |
| R5BL | C-1 |
| R5CB | B-2 |
| R5ED | B-1 |
| R5FA | C-1 |
| R5FB | C-1 |
| R5FC | C-1 |
| R5FD | C-1 |
| R5FF | C-1 |
| R5FG | C-1 |
| R5FH | C-1 |
| R5FJ | B-1 |
| R5FK | B-1 |
| R5FL | B-1 |
| R5FM | B-1 |
| R5FN | B-1 |
| R5FZ | B-1 |
| R5GA | A-1 |
| R5GB | A-1 |
| R5GC | A-1 |
| R5GE | A-2 |
| R5JG | B-1 |
| R5JH | A-2 |
| R5JK | B-1 |
| R5JL | A-2 |
| R5JM | A-2 |
| R5JN | B-3 |
| R5JP | B-2 |
| R5JQ | A-2 |
| R5JT | A-1 |
| R5KE | C-3 |
| R5LN | C-2 |
| R5MA | C-3 |
| R5MB | C-3 |
| R5MJ | C-2 |
| R5MK | C-2 |
| R5RA | B-2 |
| R5ZA | B-3 |
| R5ZB | B-2 |

|  |  |
|---|---|
| LS | C-2 |
| LT | C-2 |
| LU | C-2 |
| LV | C-2 |
| LW | C-2 |
| LX | C-2 |
| LY | C-2 |
| LZ | C-1 |
| US | B-2 |
| ZC | A-1 |
|  |  |

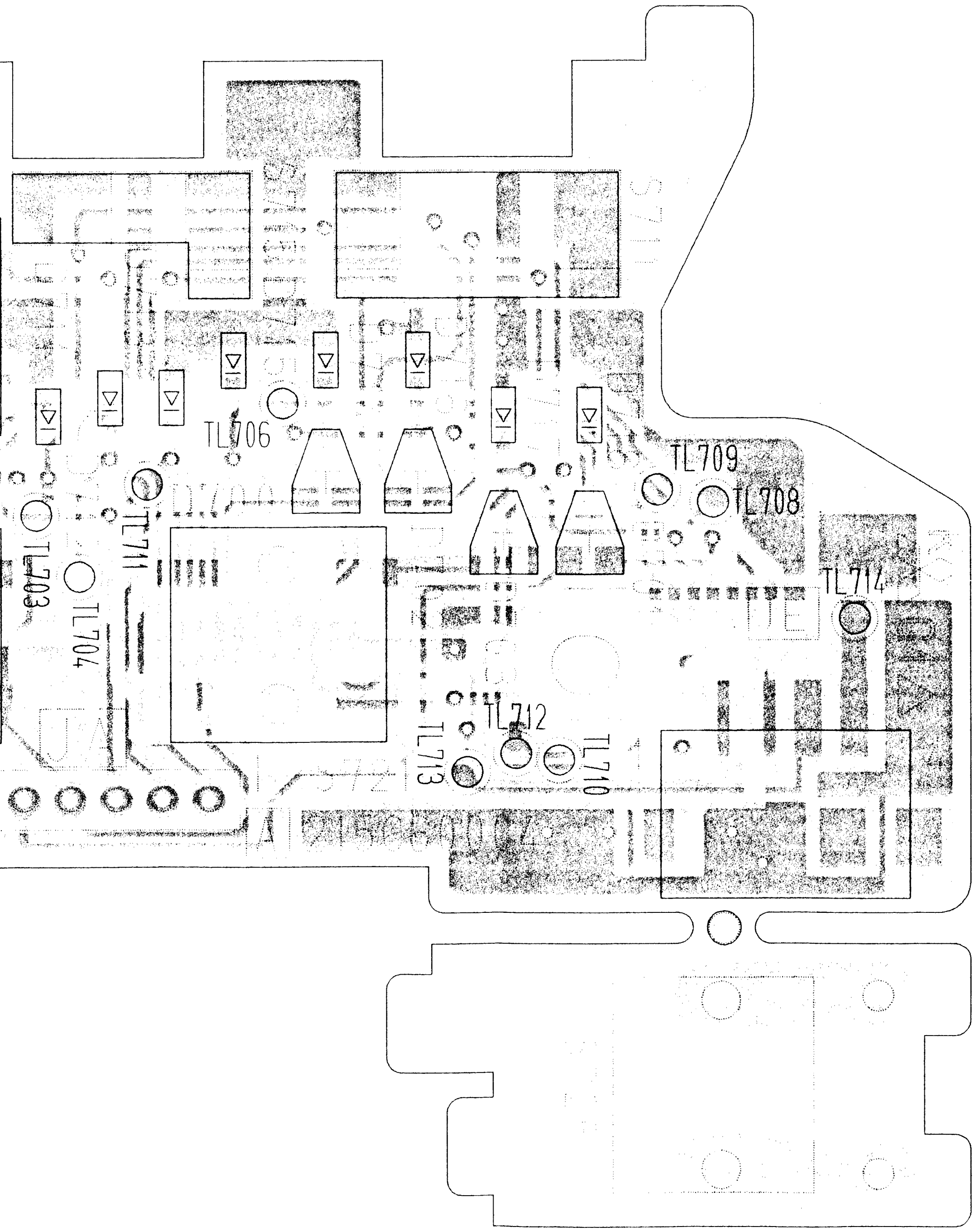
|  |  |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |


C
R5FF
R5FA
Q5FB
Q5FB
C5FA
Q5AA
R5BC
C5AS
C5AR
R5BH
R5AH
TL564
R5BK
R5BJ
Q5AH
R5BL
R5MK
R5MJ
R5LN
R5KE
TL565
TL561
TL562
TL540
TL539

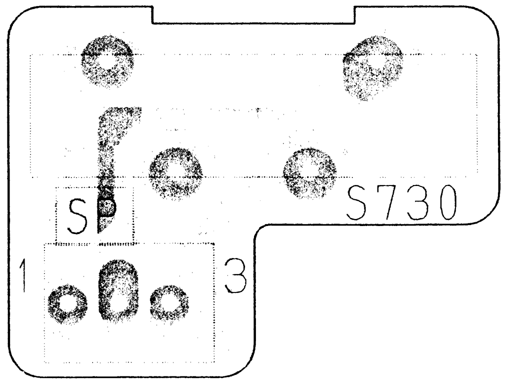
|  |  |
|---|---|
| Q5FD | B-1 |
| Q5GA | A-1 |
| Q5LB | C-3 |
|  |  |
| R4FE | C-1 |
| R5AA | A-2 |
| R5AB | A-2 |
| R5AD | A-2 |
| R5AH | C-1 |
| R5AP | B-2 |

|  |  |
|---|---|
| R5ZA | B-3 |
| R5ZB | B-2 |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

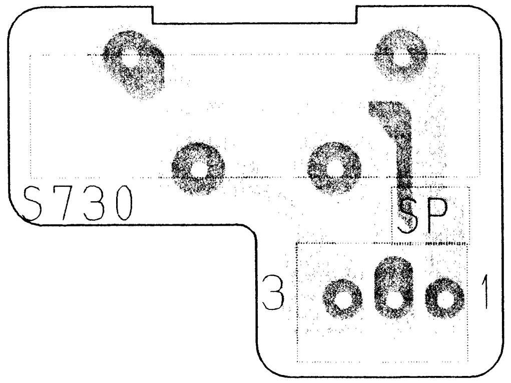
SIDE)

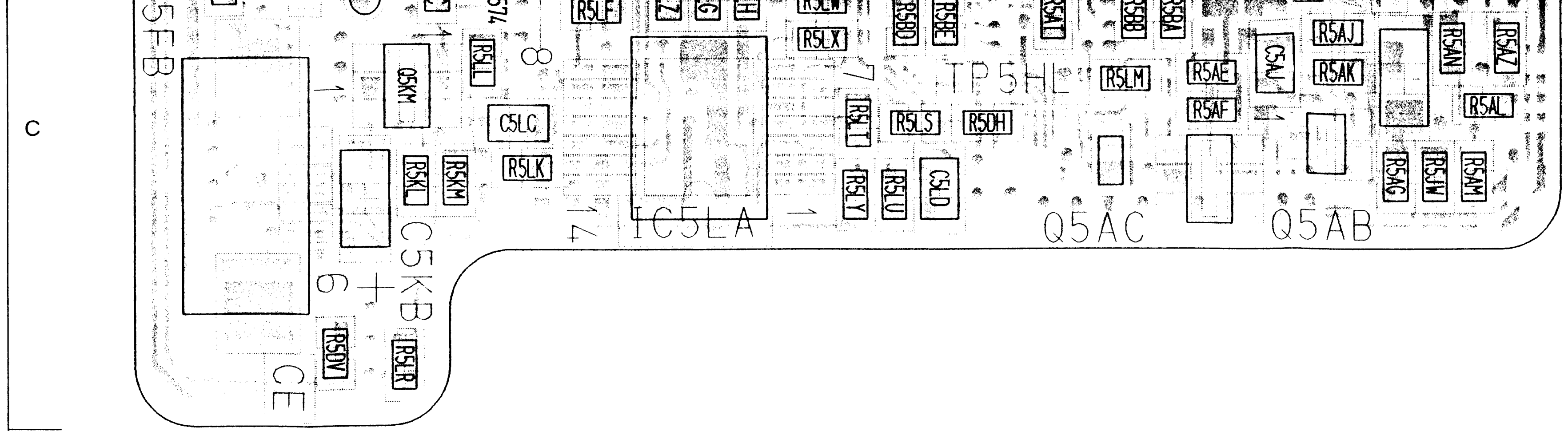

TL706
TL709
TL708
TL711
TL703
TL704
TL714
TL712
TL713
TL710

PCB-POWER SW(A SIDE)

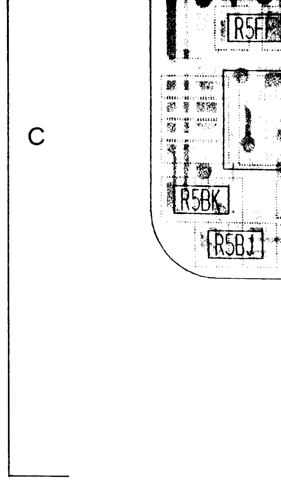


PCB-POWER SW(B SIDE)

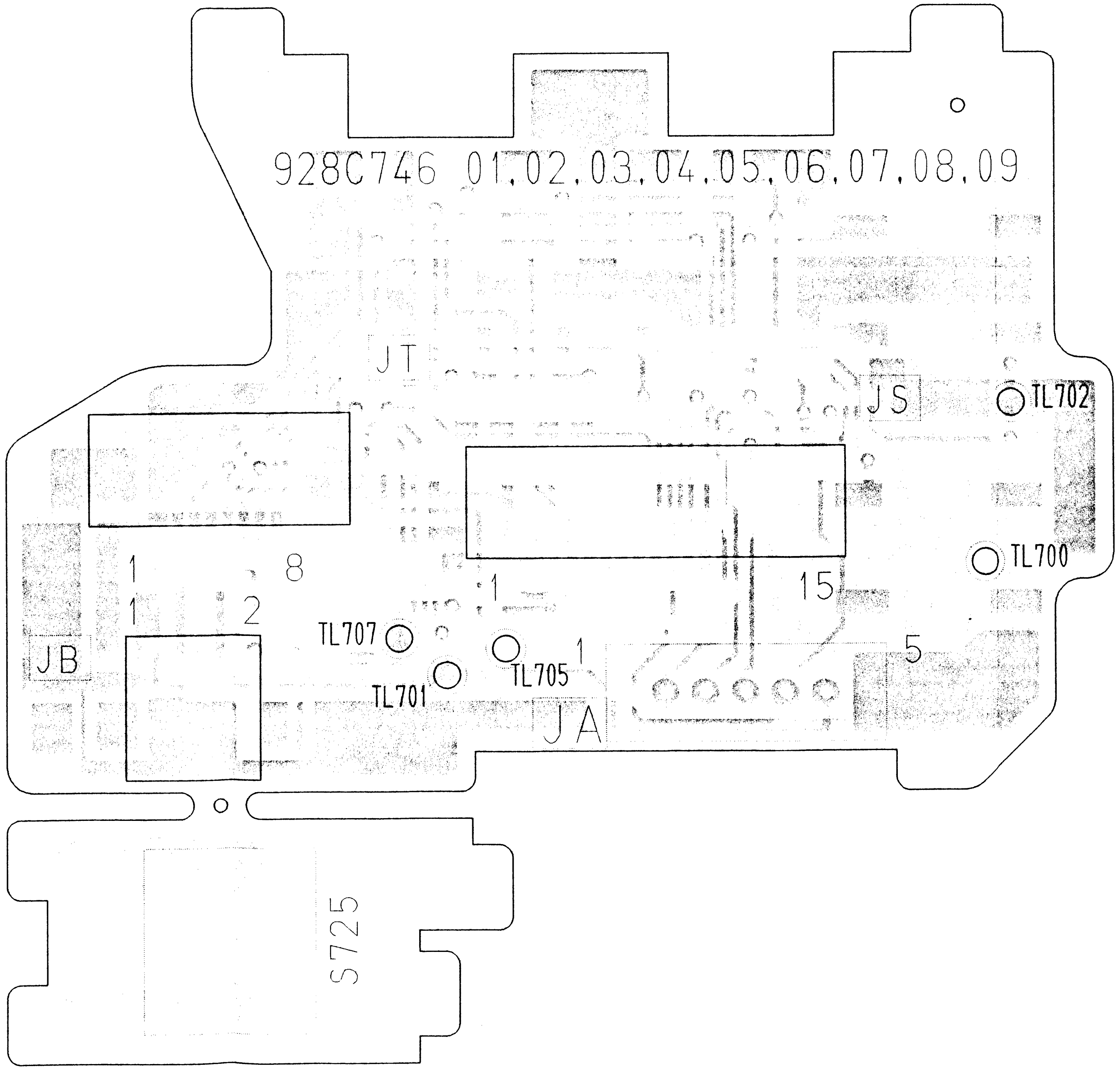



C
R5LF
R5LX
R5BD
R5BE
R5AJ
R5AK
C5AJ
R5AE
R5AF
R5LM
TP5HL
R5LS
R5DH
R5LT
R5LY
R5LU
C5LD
IC5LA
Q5AC
Q5AB
R5AN
R5AZ
R5AL
R5AG
R5JW
R5AM
Q5KM
C5LC
R5LL
R5LK
R5KL
R5KM
C5KB
R5DV
R5LR
CE

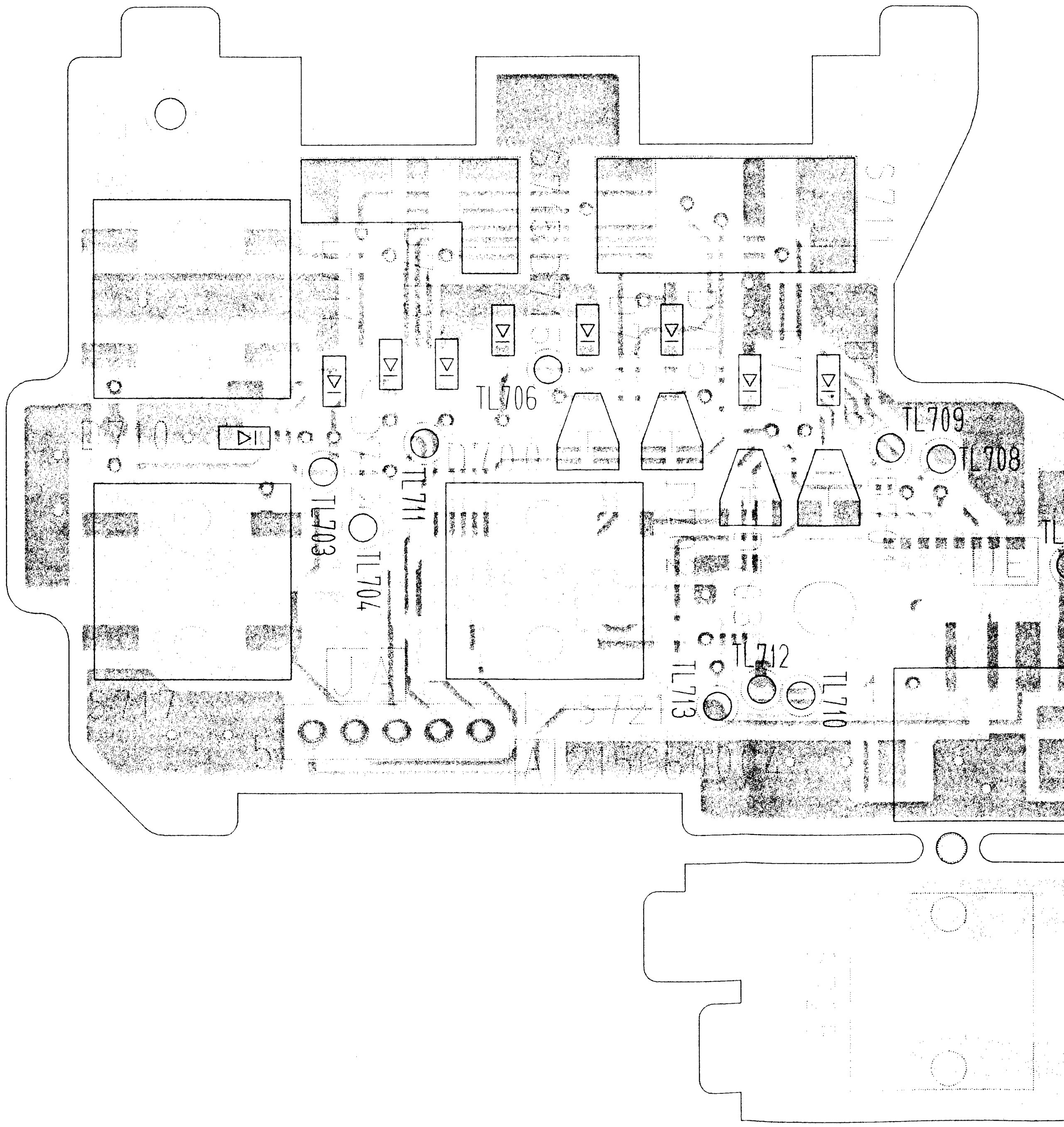
| | | | | | |
|---|---|---|---|---|---|
| Q5FK | B-3 | R5LS | C-2 | | |
| Q5FL | A-3 | R5LT | C-2 | | |
| Q5KM | C-1 | R5LU | C-2 | | |
| Q5LC | B-2 | R5LV | C-2 | | |
| | | R5LW | C-2 | | |
| R4AA | A-2 | R5LX | C-2 | | |
| R4BF | B-2 | R5LY | C-2 | | |
| R4CP | B-3 | R5LZ | C-1 | | |
| R4JH | B-3 | R5US | B-2 | | |
| R4JL | B-3 | R5ZC | A-1 | | |
| R4JN | B-3 | | | | |



PCB-VTR SW(A SIDE)

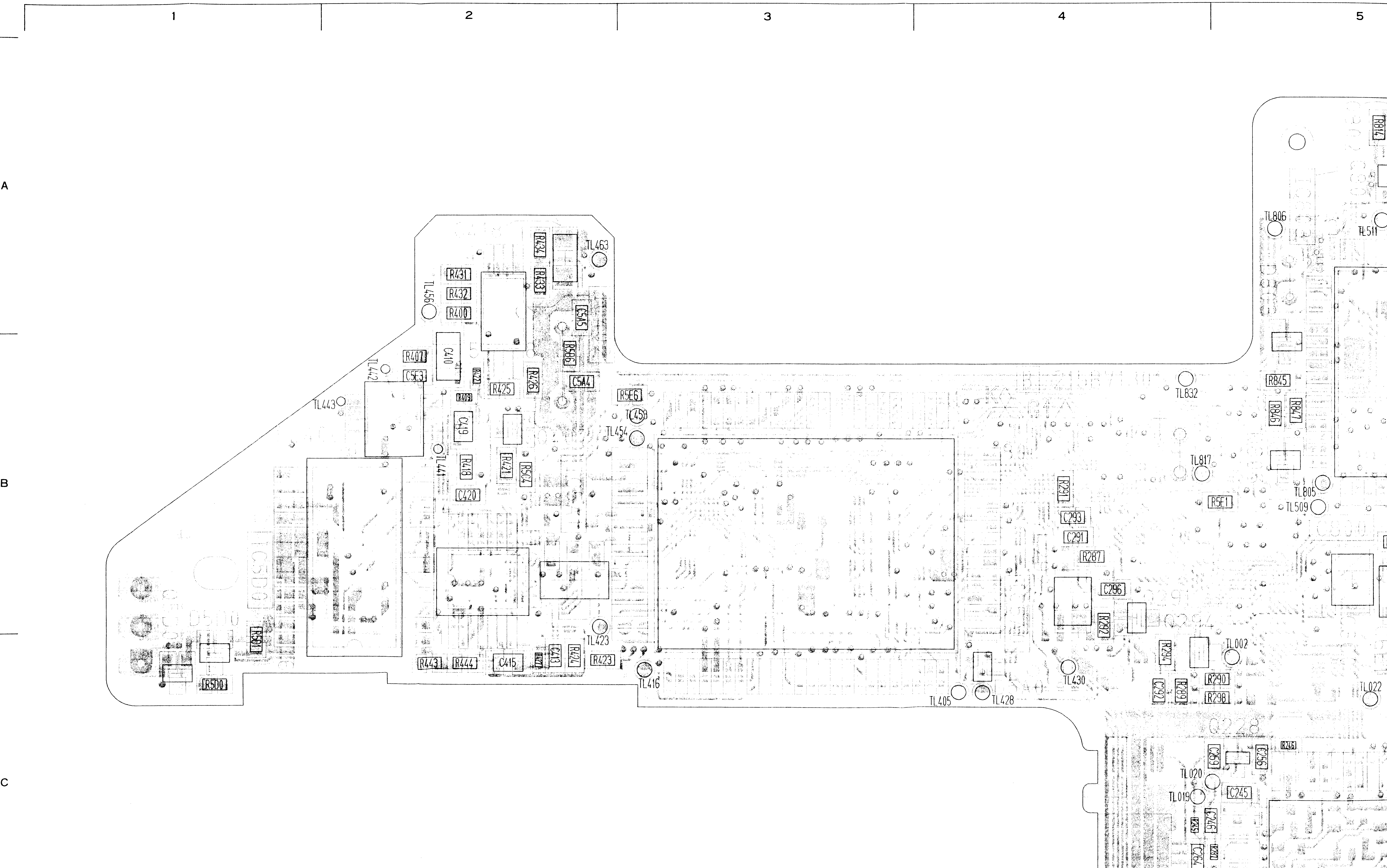

928C746 01.02.03.04.05.06.07.08.09
JT
JS
TL702
TL700
1
8
1
2
15
TL707
TL701
TL705
1
5
JB
JA
S725

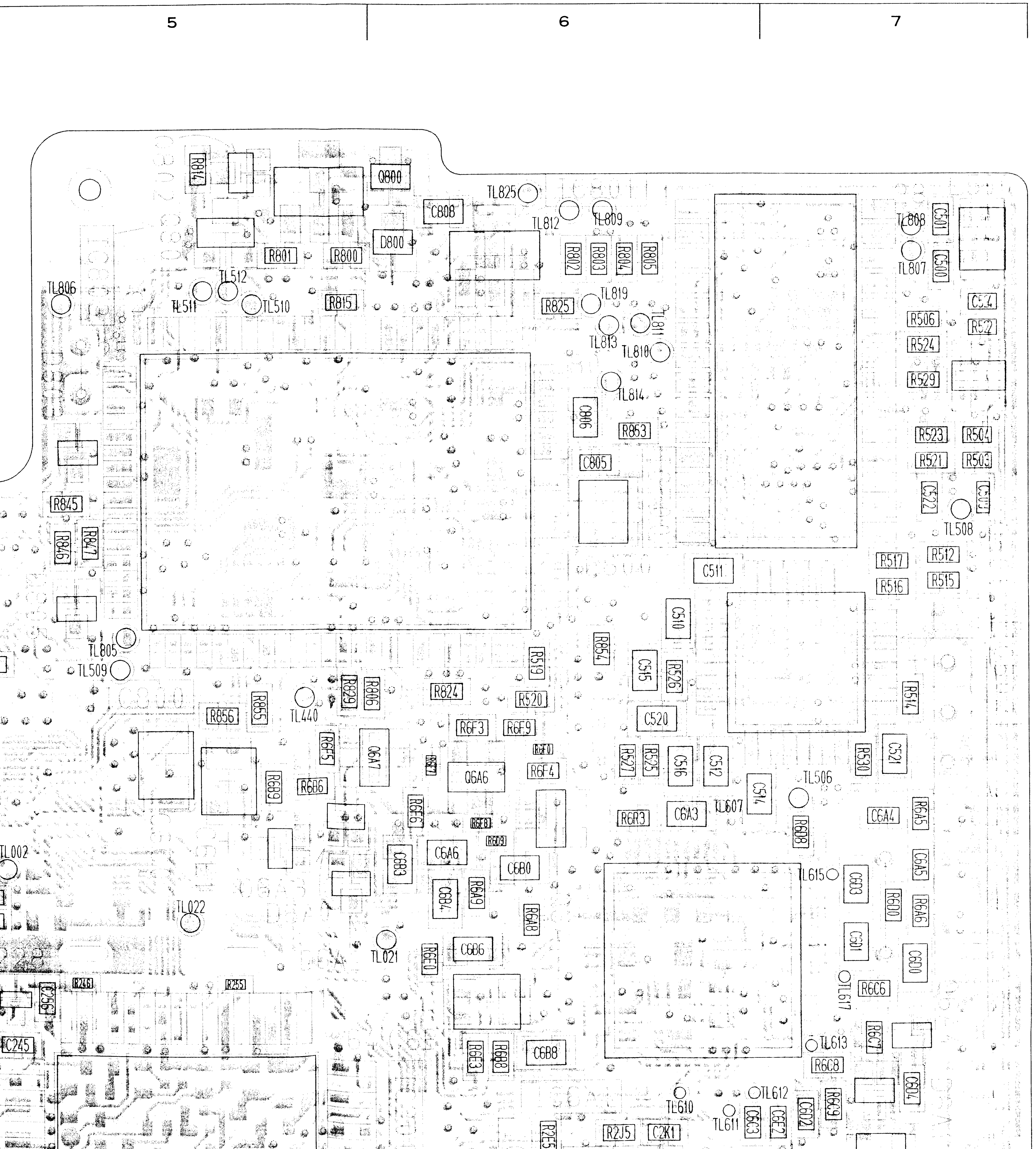
PCB-VTR SW(B SIDE)


TL706
TL709
TL708
TL703
TL711
TL704
TL712
TL713
TL710

617

PCB-VTR(B SIDE)

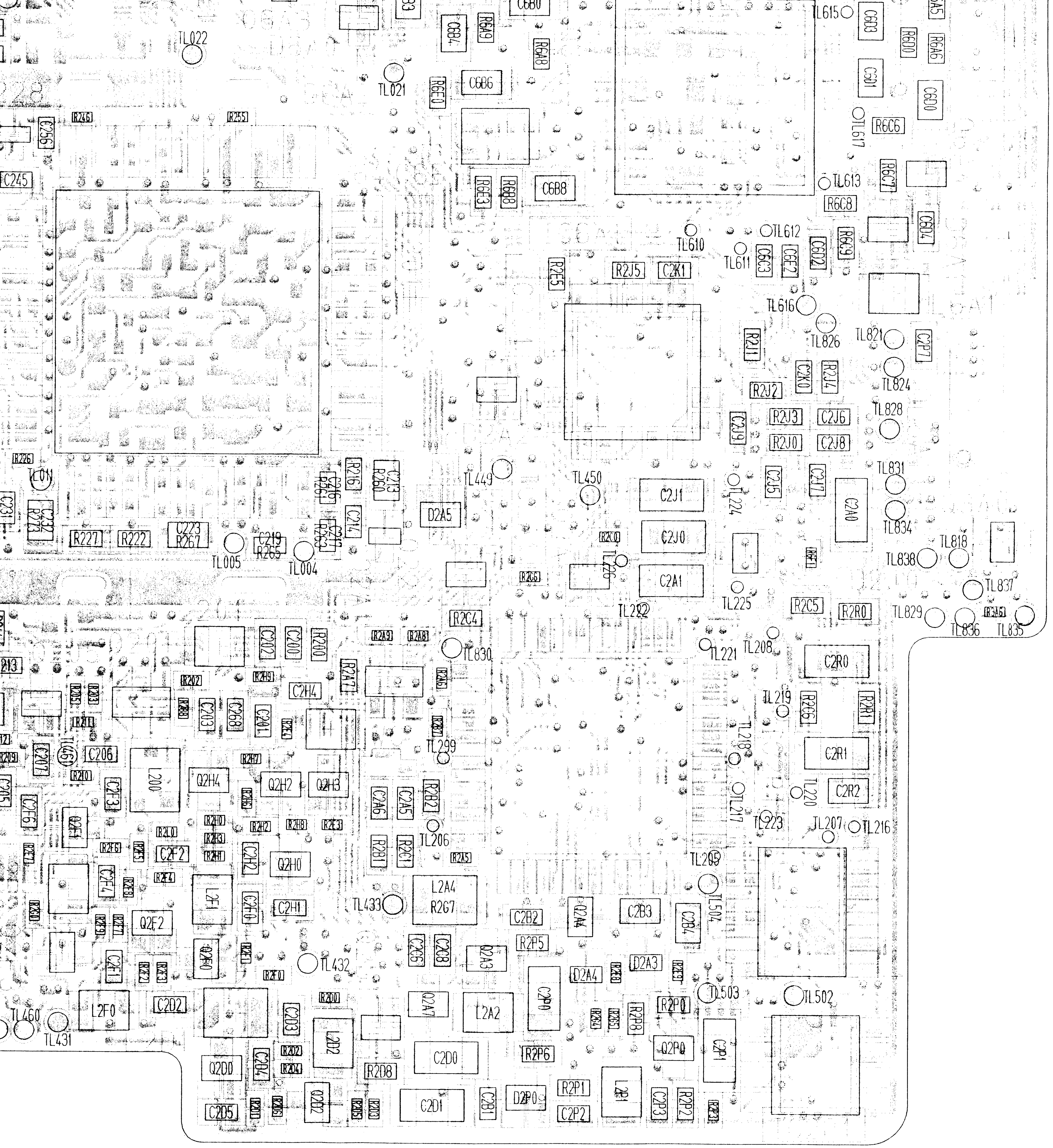

1
2
3
4
5
A
B
C
R814
TL806
TL511
TL463
R434
R431
R432
R400
R433
TL456
C5A5
R5B6
C410
R407
TL442
C5E3
R422
R409
R425
R426
C5A4
R5E6
TL453
TL454
TL443
C419
TL441
R418
R421
R5C4
C420
R501
R500
TL423
R443
R444
C415
R427
C413
R424
R423
TL416
TL405
TL428
TL430
R291
C293
C291
R287
C296
R292
R294
TL002
C292
R289
R290
R298
TL022
R845
R846
R847
TL832
TL817
TL805
TL509
R5E1
R246
C259
C256
TL020
TL019
C245
C246
R245
C264
R281


5
6
7
R814
Q800
C808
D800
R801
R800
TL825
TL812
TL809
R802
R803
R804
R805
TL806
TL511
TL512
TL510
R815
R825
TL819
TL813
TL811
TL810
TL814
C806
R853
C805
TL808
TL807
C501
C500
C524
R506
R524
R522
R529
R523
R504
R521
R503
C522
C503
TL508
R845
R846
R847
C511
R517
R512
R516
R515
TL805
TL509
C510
R854
R519
C515
R526
R514
R824
R520
R829
R806
TL440
R856
R855
C520
R6F3
R6F9
R6F0
R6F5
Q6A7
R6F7
Q6A6
R6F4
R527
R525
C516
C512
R530
C521
R689
R686
C514
TL506
R6F6
R6F8
R6R3
C6A3
TL607
R608
C6A4
R6A5
TL002
R609
C6A6
C6B0
C6B3
C6B4
R6A9
TL615
C6D3
R600
C6A5
R6A6
TL022
R6A8
TL021
R6E0
C6B6
C601
C600
R246
R255
C256
TL617
R6C6
C245
TL613
R6C7
R6E3
R6B8
C6B8
R6C8
C604
TL610
TL612
TL611
C6C3
C6E2
C602
R6C9
R2E5
R2J5
C2K1

PCB – VTR (B SIDE)

| SYMBOL NO. | ADDRESS | SYMBOL NO. | ADDRESS |
|---|---|---|---|
| C200 | D-5 | C2J5 | D-7 |
| C201 | D-5 | C2J6 | D-7 |
| C202 | D-5 | C2J7 | D-7 |
| C203 | D-5 | C2J8 | D-7 |
| C205 | E-5 | C2J9 | D-6 |
| C206 | D-5 | C2K0 | D-7 |
| C207 | D-5 | C2K1 | C-6 |
| C208 | D-4 | C2P0 | E-6 |
| C209 | D-4 | C2P1 | E-6 |
| C210 | D-4 | C2P2 | E-6 |
| C213 | D-6 | C2P3 | E-6 |
| C214 | D-5 | C2P7 | C-7 |
| C216 | D-5 | C2P8 | E-6 |
| C217 | D-5 | C2R0 | D-7 |
| C219 | D-5 | C2R1 | D-7 |
| C223 | D-5 | C2R2 | E-7 |
| C231 | D-5 | C300 | E-2 |
| C232 | D-5 | C302 | E-2 |
| C234 | D-4 | C303 | E-2 |
| C239 | C-4 | C304 | E-2 |
| C240 | D-4 | C305 | E-2 |
| C245 | C-5 | C306 | E-2 |
| C246 | C-5 | C307 | E-2 |
| C256 | C-5 | C308 | E-2 |
| C259 | C-5 | C309 | E-2 |
| C264 | C-4 | C325 | E-2 |
| C266 | D-4 | C355 | E-3 |
| C268 | D-5 | C356 | E-3 |
| C291 | B-4 | C356 | E-3 |
| C292 | C-4 | C357 | E-3 |
| C293 | B-4 | C358 | E-3 |
| C296 | B-4 | C359 | E-2 |
| C297 | D-4 | C3A1 | E-4 |
| C2A0 | D-7 | C3A3 | E-4 |
| C2A0 | D-6 | C3A7 | E-3 |
| C2A5 | E-6 | C3A8 | E-3 |
| C2A6 | E-6 | C3A9 | E-3 |
| C2B1 | E-6 | C3B0 | E-3 |
| C2B2 | E-6 | C3B3 | E-3 |
| C2B3 | E-6 | C3B5 | E-3 |
| C2B4 | E-6 | C3C1 | E-4 |
| C2C6 | E-6 | C3C3 | E-3 |
| C2C8 | E-6 | C3C7 | E-4 |
| C2D0 | E-6 | C3C8 | E-3 |
| C2D1 | E-6 | C3C9 | E-3 |
| C2D2 | E-5 | C3D1 | E-4 |
| C2D3 | E-5 | C3D2 | E-4 |
| C2D4 | E-5 | C3D3 | E-4 |
| C2D5 | E-5 | C3D4 | E-4 |
| C2F0 | E-5 | C3D5 | E-4 |
| C2F1 | E-5 | C3D6 | E-4 |
| C2F2 | E-5 | C3D7 | E-4 |
| C2F3 | E-5 | C3D8 | E-4 |
| C2F4 | E-5 | C3D9 | E-4 |
| C2F9 | E-5 | C410 | B-2 |
| C2H1 | E-5 | C413 | C-2 |
| C2H2 | E-5 | C415 | C-2 |
| C2H4 | D-5 | C418 | A-2 |
| C2J0 | D-6 | C419 | B-2 |
| C2J1 | D-6 | C420 | B-2 |

| SYMBOL NO. | ADDRESS | SYMBOL NO. | ADDRESS |
|---|---|---|---|
| R2A7 | D-5 | R2P6 | E-6 |
| R2A8 | D-6 | R2P8 | E-6 |
| R2A9 | D-6 | R2R0 | D-7 |
| R2B1 | E-6 | R2R1 | D-7 |
| R2B2 | E-6 | R300 | E-2 |

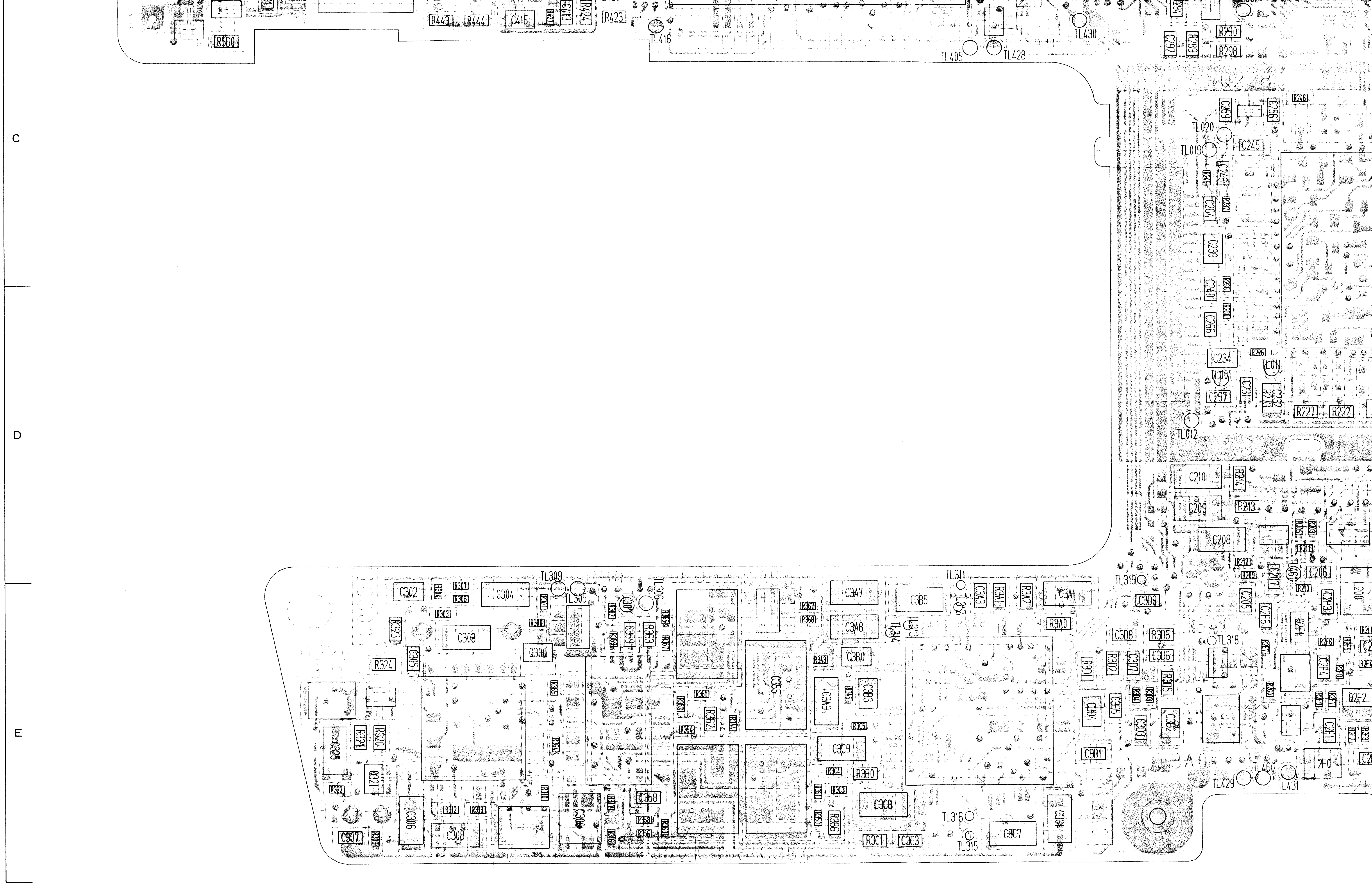

TL022
TL021
R6A9
C6B4
R6A8
C6B0
C6B6
R6E0
TL615
C6D3
R6D0
R6A6
C6D1
C6C0
TL617
R6C6
R6E3
R6B8
C6B8
TL613
R6C7
R6C8
C6D4
TL610
TL612
R2E5
R2J5
C2K1
TL611
C6C3
C6E2
C6D2
R6C9
TL616
R2J1
TL826
TL821
C2P7
R2J2
C2K0
R2J4
TL824
TL828
R2J3
C2J6
C2J9
R2J0
C2J8
C245
C256
R246
R255
R226
TL011
R227
R222
C273
R267
TL005
C219
R265
TL004
R216
R260
C213
C214
TL449
TL450
D2A5
C2J1
TL224
C2J5
C2J7
C2A0
TL831
TL834
C2J0
TL818
TL838
C2A1
TL226
TL225
TL837
R2C5
R2R0
TL829
TL836
TL835
TL222
C202
C200
R200
R2A7
R2C4
TL830
TL221
TL208
C2R0
C2H4
C203
C2G8
C201
TL219
R2C6
R2R1
C207
C206
L200
Q2H4
Q2H2
Q2H3
TL299
TL218
C2R1
C2F3
C2A6
C2A5
R2B2
TL217
TL220
C2R2
TL223
TL207
TL216
C2F6
C2F2
C2H2
Q2H0
R2B1
R2C1
TL206
TL209
C2F4
L2F1
C2F0
C2H1
TL433
L2A4
R2G7
C2B2
Q2A4
C2B3
C2B4
TL504
Q2F2
C2F1
C2C6
C2C8
R2P5
Q2A3
TL432
C2P0
D2A4
D2A3
TL503
TL502
TL460
TL431
L2F0
C2D2
C2D3
L2D2
Q2A7
L2A2
R2P0
R2P8
Q2P0
C2P1
Q2D0
C2D4
R2D8
C2D0
R2P6
R2P1
C2B1
D2P0
L2P1
C2P3
R2P2
C2D5
Q2D2
C2P2
C2D1

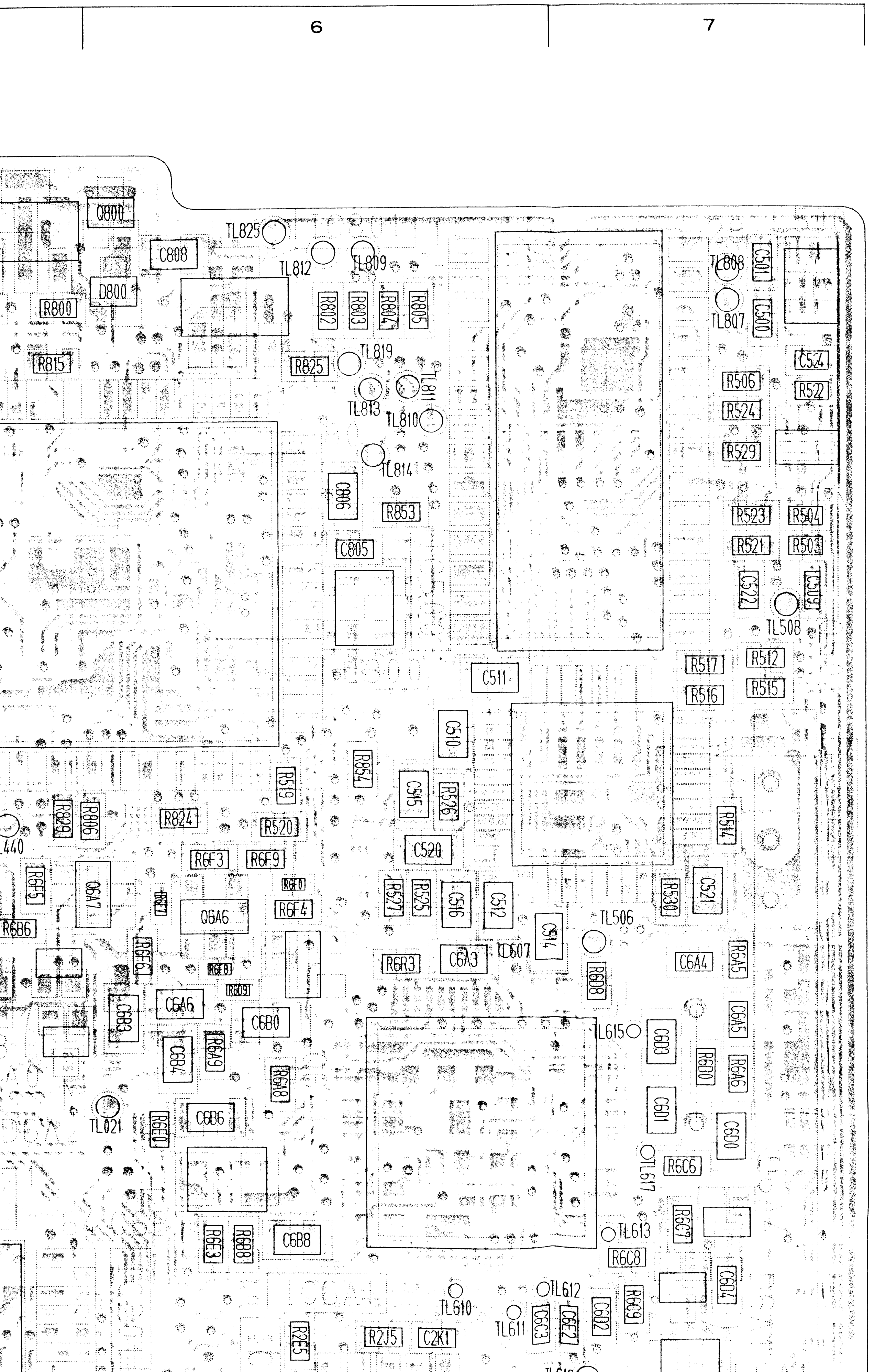
| | |
|---|---|
| C2F3 | E-5 |
| C2F4 | E-5 |
| C2F9 | E-5 |
| C2H1 | E-5 |
| C2H2 | E-5 |
| C2H4 | D-5 |
| C2J0 | D-6 |
| C2J1 | D-6 |

| | |
|---|---|
| C3D8 | E-4 |
| C3D9 | E-4 |
| C410 | B-2 |
| C413 | C-2 |
| C415 | C-2 |
| C418 | A-2 |
| C419 | B-2 |
| C420 | B-2 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R2A7 | D-5 |
| R2A8 | D-6 |
| R2A9 | D-6 |
| R2B1 | E-6 |
| R2B2 | E-6 |
| R2B7 | D-6 |
| R2C0 | D-6 |
| R2C1 | E-6 |
| R2C4 | D-6 |
| R2C5 | D-7 |
| R2C6 | D-7 |
| R2D0 | E-5 |
| R2D1 | E-5 |
| R2D2 | E-5 |
| R2D3 | E-6 |
| R2D4 | E-5 |
| R2D5 | E-5 |
| R2D6 | E-5 |
| R2D8 | E-6 |
| R2E3 | E-5 |
| R2E4 | D-5 |
| R2E5 | C-6 |
| R2E7 | E-5 |
| R2E8 | E-6 |
| R2E9 | E-6 |
| R2F0 | E-5 |
| R2F1 | E-5 |
| R2F2 | E-5 |
| R2F3 | E-5 |
| R2F4 | E-5 |
| R2F5 | E-5 |
| R2F6 | E-5 |
| R2F7 | E-5 |
| R2F8 | E-5 |
| R2F9 | E-5 |
| R2G0 | E-5 |
| R2G4 | E-6 |
| R2G5 | E-6 |
| R2G6 | D-6 |
| R2G7 | E-6 |
| R2H0 | E-5 |
| R2H1 | E-5 |
| R2H2 | E-5 |
| R2H3 | E-5 |
| R2H6 | E-5 |
| R2H7 | D-5 |
| R2H8 | E-5 |
| R2H9 | D-5 |
| R2J0 | D-7 |
| R2J1 | C-6 |
| R2J2 | D-6 |
| R2J3 | D-7 |
| R2J4 | D-7 |
| R2J5 | C-6 |
| R2L0 | E-5 |
| R2P0 | E-6 |
| R2P1 | E-6 |
| R2P2 | E-6 |
| R2P3 | E-6 |
| R2P5 | E-6 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R2P6 | E-6 |
| R2P8 | E-6 |
| R2R0 | D-7 |
| R2R1 | D-7 |
| R300 | E-2 |
| R301 | E-2 |
| R302 | E-2 |
| R303 | E-2 |
| R304 | E-2 |
| R306 | E-2 |
| R307 | E-2 |
| R309 | E-2 |
| R310 | E-2 |
| R312 | E-2 |
| R313 | E-2 |
| R316 | E-2 |
| R317 | E-2 |
| R320 | E-2 |
| R321 | E-2 |
| R322 | E-2 |
| R323 | E-2 |
| R324 | E-2 |
| R350 | E-3 |
| R351 | E-3 |
| R353 | E-3 |
| R354 | E-3 |
| R355 | E-3 |
| R356 | E-3 |
| R357 | E-3 |
| R358 | E-3 |
| R359 | E-2 |
| R360 | E-3 |
| R361 | E-3 |
| R362 | E-3 |
| R363 | E-3 |
| R364 | E-2 |
| R365 | E-2 |
| R366 | E-3 |
| R367 | E-3 |
| R368 | E-3 |
| R3A0 | E-4 |
| R3A1 | E-4 |
| R3A2 | E-4 |
| R3A3 | E-3 |
| R3A4 | E-3 |
| R3A5 | E-3 |
| R3A6 | D-7 |
| R3B0 | E-3 |
| R3C1 | E-3 |
| R3C3 | E-3 |
| R3C4 | E-3 |
| R3C5 | E-3 |
| R3D1 | E-4 |
| R3D2 | E-4 |
| R3D3 | E-4 |
| R3D4 | E-4 |
| R3D5 | E-4 |
| R3D6 | E-4 |
| R400 | A-2 |
| R407 | B-2 |


C
D
E
R500
R443
R444
C415
C413
R424
R423
TL416
TL405
TL428
TL430
C292
R289
R290
R298
Q228
C269
C256
R246
TL020
TL019
C245
C246
C264
C239
C240
C266
C234
R226
TL061
TL011
C231
C297
R227
R222
TL012
C210
R214
C209
R213
C208
R212
R209
C207
TL461
C206
R210
C205
C2F6
C2F3
C2F4
Q2F1
Q2F2
R2F6
C2F1
L2F0
TL309
TL305
TL306
TL311
TL319
TL318
TL314
TL313
TL312
C302
C304
C3A7
C3B5
C3A3
R3A1
R3A7
C3A1
R3A0
C309
C3A8
R367
R368
R323
R324
C303
C305
Q300
C359
R363
C3B0
C355
C3A9
C3B3
R362
R361
R380
C3C9
R3B0
C3C8
R366
R3C1
C3C3
TL316
TL315
C3C7
C3C4
C308
R306
R301
R302
C307
C306
R305
C304
C305
C303
C302
C3D1
R321
R320
C325
Q321
R322
C306
C307
C308
R312
C358
R3A0
TL429
TL460
TL431
C300


6
7
Q800
TL825
C808
TL812
TL809
D800
R800
R802
R803
R804
R805
TL808
C501
TL807
C500
R815
R825
TL819
TL811
C524
R506
R522
TL813
TL810
R524
R529
TL814
C806
R853
R523
R504
R521
R503
C805
C522
C509
TL508
R517
R512
C511
R516
R515
C510
R854
R519
C515
R526
R544
R829
R806
R824
R520
C520
L440
R6F3
R6F9
R6E0
R6F4
R6F5
R527
R525
C516
C512
R530
C521
Q6A7
Q6A6
TL506
C514
TL607
R6R3
C6A3
R6D8
C6A4
R6A5
R6B6
R6F6
C6A6
C6B3
C6B0
C6A5
TL615
C603
R600
R6A6
C6B4
R6A9
R6A8
TL021
C6B6
C601
C600
TL617
R6C6
R6E3
R6B8
C6B8
R6C7
TL613
R6C8
TL612
C604
TL610
TL611
C6C3
C6E2
C602
R6C9
R2E5
R2J5
C2K1

PCB – VTR (B SIDE)

| SYMBOL NO. | ADDRESS |
|---|---|
| C200 | D-5 |
| C201 | D-5 |
| C202 | D-5 |
| C203 | D-5 |
| C205 | E-5 |
| C206 | D-5 |
| C207 | D-5 |
| C208 | D-4 |
| C209 | D-4 |
| C210 | D-4 |
| C213 | D-6 |
| C214 | D-5 |
| C216 | D-5 |
| C217 | D-5 |
| C219 | D-5 |
| C223 | D-5 |
| C231 | D-5 |
| C232 | D-5 |
| C234 | D-4 |
| C239 | C-4 |
| C240 | D-4 |
| C245 | C-5 |
| C246 | C-5 |
| C256 | C-5 |
| C259 | C-5 |
| C264 | C-4 |
| C266 | D-4 |
| C268 | D-5 |
| C291 | B-4 |
| C292 | C-4 |
| C293 | B-4 |
| C296 | B-4 |
| C297 | D-4 |
| C2A0 | D-7 |
| C2A0 | D-6 |
| C2A5 | E-6 |
| C2A6 | E-6 |
| C2B1 | E-6 |
| C2B2 | E-6 |
| C2B3 | E-6 |
| C2B4 | E-6 |
| C2C6 | E-6 |
| C2C8 | E-6 |
| C2D0 | E-6 |
| C2D1 | E-6 |
| C2D2 | E-5 |
| C2D3 | E-5 |
| C2D4 | E-5 |
| C2D5 | E-5 |
| C2F0 | E-5 |
| C2F1 | E-5 |
| C2F2 | E-5 |
| C2F3 | E-5 |
| C2F4 | E-5 |
| C2F9 | E-5 |
| C2H1 | E-5 |
| C2H2 | E-5 |
| C2H4 | D-5 |
| C2J0 | D-6 |
| C2J1 | D-6 |

| SYMBOL NO. | ADDRESS |
|---|---|
| C2J5 | D-7 |
| C2J6 | D-7 |
| C2J7 | D-7 |
| C2J8 | D-7 |
| C2J9 | D-6 |
| C2K0 | D-7 |
| C2K1 | C-6 |
| C2P0 | E-6 |
| C2P1 | E-6 |
| C2P2 | E-6 |
| C2P3 | E-6 |
| C2P7 | C-7 |
| C2P8 | E-6 |
| C2R0 | D-7 |
| C2R1 | D-7 |
| C2R2 | E-7 |
| C300 | E-2 |
| C302 | E-2 |
| C303 | E-2 |
| C304 | E-2 |
| C305 | E-2 |
| C306 | E-2 |
| C307 | E-2 |
| C308 | E-2 |
| C309 | E-2 |
| C325 | E-2 |
| C355 | E-3 |
| C356 | E-3 |
| C356 | E-3 |
| C357 | E-3 |
| C358 | E-3 |
| C359 | E-2 |
| C3A1 | E-4 |
| C3A3 | E-4 |
| C3A7 | E-3 |
| C3A8 | E-3 |
| C3A9 | E-3 |
| C3B0 | E-3 |
| C3B3 | E-3 |
| C3B5 | E-3 |
| C3C1 | E-4 |
| C3C3 | E-3 |
| C3C7 | E-4 |
| C3C8 | E-3 |
| C3C9 | E-3 |
| C3D1 | E-4 |
| C3D2 | E-4 |
| C3D3 | E-4 |
| C3D4 | E-4 |
| C3D5 | E-4 |
| C3D6 | E-4 |
| C3D7 | E-4 |
| C3D8 | E-4 |
| C3D9 | E-4 |
| C410 | B-2 |
| C413 | C-2 |
| C415 | C-2 |
| C418 | A-2 |
| C419 | B-2 |
| C420 | B-2 |

| SYMBOL NO. | ADDRESS |
|---|---|
| C500 | A-7 |
| C501 | A-7 |
| C509 | B-7 |
| C510 | B-6 |
| C511 | B-6 |
| C512 | B-6 |
| C514 | B-6 |
| C515 | B-6 |
| C516 | B-6 |
| C520 | B-6 |
| C521 | B-7 |
| C522 | B-7 |
| C524 | A-7 |
| C5A4 | B-2 |
| C5A5 | A-2 |
| C5E3 | B-2 |
| C6A3 | B-6 |
| C6A4 | B-7 |
| C6A5 | C-7 |
| C6A6 | C-6 |
| C6B0 | C-6 |
| C6B3 | C-6 |
| C6B4 | C-6 |
| C6B5 | C-6 |
| C6B6 | C-6 |
| C6B7 | C-6 |
| C6B8 | C-6 |
| C6C0 | B-5 |
| C6C8 | C-7 |
| C6D0 | C-7 |
| C6D1 | C-7 |
| C6D2 | C-7 |
| C6D3 | C-7 |
| C6D4 | C-7 |
| C6E1 | C-5 |
| C6E2 | C-7 |
| C6E4 | B-6 |
| C803 | A-5 |
| C805 | B-6 |
| C806 | A-6 |
| C808 | A-6 |
| | |
| D2A0 | D-6 |
| D2A2 | D-6 |
| D2A3 | E-6 |
| D2A4 | E-6 |
| D2A5 | D-6 |
| D2J0 | D-7 |
| D2P0 | E-6 |
| D3A0 | E-4 |
| D5A0 | C-4 |
| D5D0 | B-1 |
| D6A0 | C-5 |
| D6A1 | C-7 |
| D6A2 | C-5 |
| D800 | A-6 |
| D803 | A-5 |
| D805 | B-5 |
| | |
| DL6A1 | D-7 |

| SYMBOL NO. | ADDRESS |
|---|---|
| | |
| FL400 | B-2 |
| | |
| IC201 | C-6 |
| IC2A1 | D-6 |
| IC2J1 | C-6 |
| IC2P1 | E-7 |
| IC2R1 | D-7 |
| IC300 | E-2 |
| IC350 | E-2 |
| IC3A0 | E-4 |
| IC401 | B-2 |
| IC402 | A-2 |
| IC500 | B-6 |
| IC502 | B-7 |
| IC5A0 | B-4 |
| IC5A1 | B-2 |
| IC5D0 | B-1 |
| IC6A1 | C-6 |
| IC800 | B-5 |
| IC801 | A-6 |
| IC803 | A-5 |
| | |
| L200 | E-5 |
| L201 | D-5 |
| L292 | B-4 |
| L2A2 | E-6 |
| L2A4 | E-6 |
| L2D1 | E-5 |
| L2D2 | E-5 |
| L2F0 | E-5 |
| L2F1 | E-5 |
| L2F2 | E-5 |
| L2H2 | E-5 |
| L2P1 | E-6 |
| L321 | E-1 |
| L3A0 | E-4 |
| L500 | A-7 |
| L6A1 | C-7 |
| L6A5 | B-6 |
| L800 | B-6 |
| | |
| Q201 | D-5 |
| Q205 | D-5 |
| Q221 | D-6 |
| Q228 | C-5 |
| Q291 | B-4 |
| Q294 | B-4 |
| Q2A1 | D-5 |
| Q2A3 | E-6 |
| Q2A4 | E-6 |
| Q2A7 | E-6 |
| Q2A9 | D-6 |
| Q2D0 | E-5 |
| Q2D1 | E-5 |
| Q2D2 | E-5 |
| Q2F0 | E-5 |
| Q2F1 | E-5 |
| Q2F2 | E-5 |
| Q2F3 | E-5 |

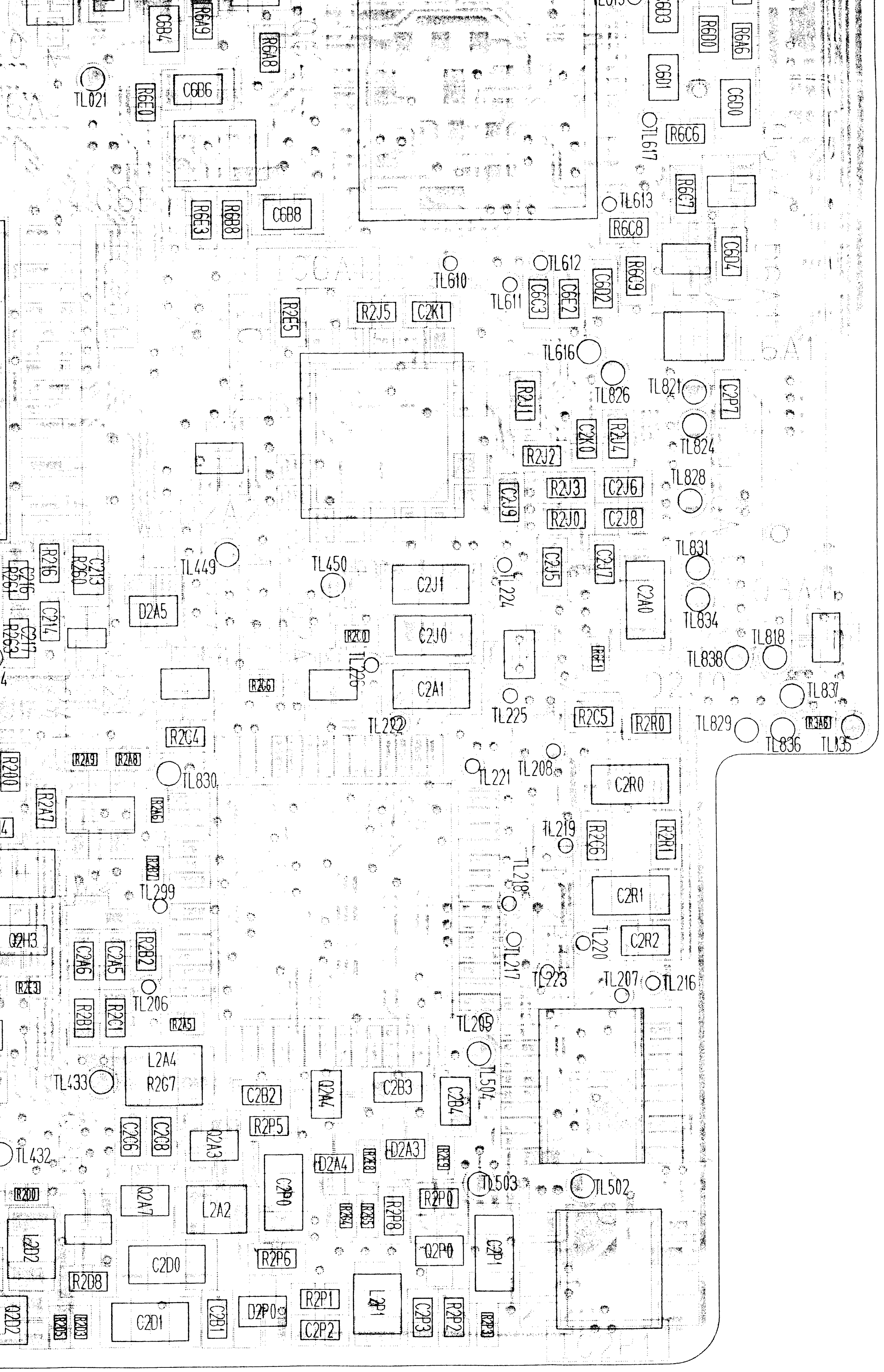
| SYMBOL NO. | ADDRESS |
|---|---|
| Q2H0 | E-5 |
| Q2H2 | E-5 |
| Q2H3 | E-5 |
| Q2H4 | E-5 |
| Q2P0 | E-6 |
| Q300 | E-2 |
| Q301 | E-2 |
| Q320 | E-1 |
| Q321 | E-2 |
| Q350 | E-3 |
| Q3A0 | D-7 |
| Q407 | B-2 |
| Q501 | B-7 |
| Q5D0 | B-1 |
| Q6A1 | C-6 |
| Q6A3 | C-5 |
| Q6A4 | C-7 |
| Q6A6 | B-6 |
| Q6A7 | B-6 |
| Q800 | A-6 |
| Q801 | A-5 |
| Q802 | A-5 |
| | |
| R200 | D-5 |
| R202 | D-5 |
| R203 | D-5 |
| R205 | D-5 |
| R209 | D-5 |
| R210 | E-5 |
| R211 | D-5 |
| R212 | D-5 |
| R213 | D-5 |
| R214 | D-5 |
| R216 | D-5 |
| R222 | D-5 |
| R226 | D-5 |
| R227 | D-5 |
| R236 | C-5 |
| R237 | C-5 |
| R237 | D-5 |
| R245 | C-4 |
| R246 | C-5 |
| R255 | C-5 |
| R260 | D-6 |
| R261 | D-5 |
| R263 | D-5 |
| R265 | D-5 |
| R267 | D-5 |
| R280 | D-5 |
| R287 | B-4 |
| R289 | C-4 |
| R290 | C-5 |
| R291 | B-4 |
| R292 | B-4 |
| R294 | C-4 |
| R298 | C-5 |
| R299 | C-5 |
| R2A3 | D-6 |
| R2A5 | E-6 |
| R2A6 | D-6 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R2A7 | D-5 |
| R2A8 | D-6 |
| R2A9 | D-6 |
| R2B1 | E-6 |
| R2B2 | E-6 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R2P6 | E-6 |
| R2P8 | E-6 |
| R2R0 | D-7 |
| R2R1 | D-7 |
| R300 | E-2 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R409 | B-2 |
| R418 | B-2 |
| R421 | B-2 |
| R422 | B-2 |
| R423 | C-2 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R6F4 | B-6 |
| R6F5 | B-5 |
| R6F6 | B-6 |
| R6F7 | B-6 |
| R6F8 | B-6 |


C6B4
R6A9
R6A8
TL021
R6E0
C6B6
R6E3
R6B8
C6B8
C603
R600
R6A6
C601
C600
TL617
R6C6
TL613
R6C7
R6C8
C604
R6C9
TL610
TL612
TL611
C6C3
C6E2
C6D2
R2E5
R2J5
C2K1
TL616
R2J1
TL826
TL821
C2P7
C2K0
R2J4
TL824
R2J2
R2J3
C2J6
TL828
C2J9
R2J0
C2J8
TL831
R216
C213
TL449
TL450
C2J1
TL224
C2J5
C2J7
C2A0
D2A5
C214
C2J0
TL834
TL818
TL838
TL226
C2A1
TL837
TL225
R2C5
R2R0
TL829
TL836
TL135
R2C4
TL222
TL830
TL221
TL208
C2R0
R2A7
TL219
R2G6
R2R1
TL299
TL218
C2R1
TL220
C2R2
Q2H3
C2A6
C2A5
R2B2
TL217
TL223
TL207
TL216
TL206
R2B1
R2C1
TL209
L2A4
R2G7
TL433
C2B2
Q2A4
C2B3
C2B4
TL504
C2D6
C2D8
D2A3
R2P5
TL432
D2A4
D2A3
Q2A7
L2A2
C2P0
TL503
TL502
R2P0
R2P8
Q2P0
C2P1
L2D2
R2D8
C2D0
R2P6
C2D1
C2B1
D2P0
R2P1
C2P2
L2P1
C2P3
R2P2
Q2D2

|  |  |
|---|---|
| C2F4 | E-5 |
| C2F9 | E-5 |
| C2H1 | E-5 |
| C2H2 | E-5 |
| C2H4 | D-5 |
| C2J0 | D-6 |
| C2J1 | D-6 |

|  |  |
|---|---|
| C3D9 | E-4 |
| C410 | B-2 |
| C413 | C-2 |
| C415 | C-2 |
| C418 | A-2 |
| C419 | B-2 |
| C420 | B-2 |

|  |  |
|---|---|
| D6A1 | C-7 |
| D6A2 | C-5 |
| D800 | A-6 |
| D803 | A-5 |
| D805 | B-5 |
|  |  |
| DL6A1 | D-7 |

|  |  |
|---|---|
| Q2D0 | E-5 |
| Q2D1 | E-5 |
| Q2D2 | E-5 |
| Q2F0 | E-5 |
| Q2F1 | E-5 |
| Q2F2 | E-5 |
| Q2F3 | E-5 |

|  |  |
|---|---|
| R292 | B-4 |
| R294 | C-4 |
| R298 | C-5 |
| R299 | C-5 |
| R2A3 | D-6 |
| R2A5 | E-6 |
| R2A6 | D-6 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R2A7 | D-5 |
| R2A8 | D-6 |
| R2A9 | D-6 |
| R2B1 | E-6 |
| R2B2 | E-6 |
| R2B7 | D-6 |
| R2C0 | D-6 |
| R2C1 | E-6 |
| R2C4 | D-6 |
| R2C5 | D-7 |
| R2C6 | D-7 |
| R2D0 | E-5 |
| R2D1 | E-5 |
| R2D2 | E-5 |
| R2D3 | E-6 |
| R2D4 | E-5 |
| R2D5 | E-5 |
| R2D6 | E-5 |
| R2D8 | E-6 |
| R2E3 | E-5 |
| R2E4 | D-5 |
| R2E5 | C-6 |
| R2E7 | E-5 |
| R2E8 | E-6 |
| R2E9 | E-6 |
| R2F0 | E-5 |
| R2F1 | E-5 |
| R2F2 | E-5 |
| R2F3 | E-5 |
| R2F4 | E-5 |
| R2F5 | E-5 |
| R2F6 | E-5 |
| R2F7 | E-5 |
| R2F8 | E-5 |
| R2F9 | E-5 |
| R2G0 | E-5 |
| R2G4 | E-6 |
| R2G5 | E-6 |
| R2G6 | D-6 |
| R2G7 | E-6 |
| R2H0 | E-5 |
| R2H1 | E-5 |
| R2H2 | E-5 |
| R2H3 | E-5 |
| R2H6 | E-5 |
| R2H7 | D-5 |
| R2H8 | E-5 |
| R2H9 | D-5 |
| R2J0 | D-7 |
| R2J1 | C-6 |
| R2J2 | D-6 |
| R2J3 | D-7 |
| R2J4 | D-7 |
| R2J5 | C-6 |
| R2L0 | E-5 |
| R2P0 | E-6 |
| R2P1 | E-6 |
| R2P2 | E-6 |
| R2P3 | E-6 |
| R2P5 | E-6 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R2P6 | E-6 |
| R2P8 | E-6 |
| R2R0 | D-7 |
| R2R1 | D-7 |
| R300 | E-2 |
| R301 | E-2 |
| R302 | E-2 |
| R303 | E-2 |
| R304 | E-2 |
| R306 | E-2 |
| R307 | E-2 |
| R309 | E-2 |
| R310 | E-2 |
| R312 | E-2 |
| R313 | E-2 |
| R316 | E-2 |
| R317 | E-2 |
| R320 | E-2 |
| R321 | E-2 |
| R322 | E-2 |
| R323 | E-2 |
| R324 | E-2 |
| R350 | E-3 |
| R351 | E-3 |
| R353 | E-3 |
| R354 | E-3 |
| R355 | E-3 |
| R356 | E-3 |
| R357 | E-3 |
| R358 | E-3 |
| R359 | E-2 |
| R360 | E-3 |
| R361 | E-3 |
| R362 | E-3 |
| R363 | E-3 |
| R364 | E-2 |
| R365 | E-2 |
| R366 | E-3 |
| R367 | E-3 |
| R368 | E-3 |
| R3A0 | E-4 |
| R3A1 | E-4 |
| R3A2 | E-4 |
| R3A3 | E-3 |
| R3A4 | E-3 |
| R3A5 | E-3 |
| R3A6 | D-7 |
| R3B0 | E-3 |
| R3C1 | E-3 |
| R3C3 | E-3 |
| R3C4 | E-3 |
| R3C5 | E-3 |
| R3D1 | E-4 |
| R3D2 | E-4 |
| R3D3 | E-4 |
| R3D4 | E-4 |
| R3D5 | E-4 |
| R3D6 | E-4 |
| R400 | A-2 |
| R407 | B-2 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R409 | B-2 |
| R418 | B-2 |
| R421 | B-2 |
| R422 | B-2 |
| R423 | C-2 |
| R424 | C-2 |
| R425 | B-2 |
| R426 | B-2 |
| R427 | C-2 |
| R431 | A-2 |
| R432 | A-2 |
| R433 | A-2 |
| R434 | A-2 |
| R443 | C-2 |
| R444 | C-2 |
| R500 | C-1 |
| R501 | C-1 |
| R503 | B-7 |
| R504 | A-7 |
| R506 | A-7 |
| R510 | B-7 |
| R512 | B-7 |
| R514 | B-7 |
| R515 | B-7 |
| R516 | B-7 |
| R517 | B-7 |
| R519 | B-6 |
| R520 | B-6 |
| R521 | B-7 |
| R522 | A-7 |
| R523 | A-7 |
| R524 | A-7 |
| R525 | B-6 |
| R526 | B-6 |
| R527 | B-6 |
| R529 | A-7 |
| R5B6 | B-2 |
| R5C4 | B-2 |
| R5E1 | B-5 |
| R5E6 | B-3 |
| R608 | B-7 |
| R6A5 | B-7 |
| R6A6 | C-7 |
| R6A8 | C-6 |
| R6A9 | C-6 |
| R6B6 | B-5 |
| R6B8 | C-6 |
| R6B9 | B-5 |
| R6C6 | C-7 |
| R6C7 | C-7 |
| R6C8 | C-7 |
| R6C9 | C-7 |
| R6D0 | C-7 |
| R6D1 | B-5 |
| R6D9 | B-6 |
| R6E0 | C-6 |
| R6E3 | C-6 |
| R6F0 | B-6 |
| R6F1 | D-7 |
| R6F3 | B-6 |

| SYMBOL NO. | ADDRESS |
|---|---|
| R6F4 | B-6 |
| R6F5 | B-5 |
| R6F6 | B-6 |
| R6F7 | B-6 |
| R6F8 | B-6 |
| R6F9 | B-6 |
| R6R3 | B-6 |
| R800 | A-5 |
| R801 | A-5 |
| R802 | A-6 |
| R803 | A-6 |
| R804 | A-6 |
| R805 | A-6 |
| R806 | B-6 |
| R814 | A-5 |
| R815 | A-5 |
| R824 | B-6 |
| R825 | A-6 |
| R829 | B-5 |
| R845 | B-5 |
| R846 | B-5 |
| R847 | B-5 |
| R853 | A-6 |
| R854 | B-6 |
| R855 | B-5 |
| R856 | B-5 |
|  |  |
| TL456 | A-2 |
| TL463 | A-2 |
| TL806 | A-5 |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |